THE PUBLIC DOMAIN AS THE FOUNDATION OF CIVIC LIFE

A SYSTEMIC APPROACH TO URBAN ISSUSES

A CASE STUDY ON TEHRAN

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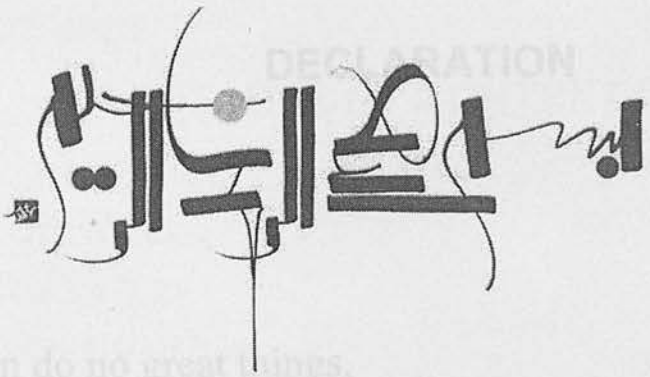
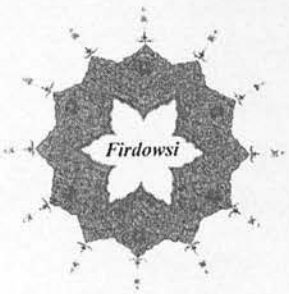


In The Name of God
The Beneficent, The
Merciful



In the Name of God, Lord of Life and Wisdom,
The Ultimate, unsurpassed by thought;
Lord of Fame, Lord of Status;
He who Provides our Daily Bread,
And Guides us along the True Path;
Lord of the Universe and Revolving Heavens,
Illuminator of the Moon, the Venus and the Sun;
He is above Identification or Speculation;
He's the Creator of the Transcendent Figure.

DECLARATION

We can do no great things,
only small things with great love.

"Mother Teresa"

It is said that lovers make the world, while the wise make the most of it. I dedicate this work to all lovers whose love has set up the public domain to be the foundation of all involvement.

TABLE OF CONTENTS

TABLE OF FIGURES

TABLE OF TABLES

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ABSTRACT

Urban spaces act as systems and providing they have appropriate functions, they can develop and evolve public domains in a way to generate, revive and act in accordance with the continuity of civic life. Any intervention inside a city and any projects undertaken generate new spaces, elements and facilities in order to fulfil the ever-changing expectations of the citizens and to satisfy their various anticipations of civic life. These new spaces and realms necessarily ought to be in line with (covert or overt) active urban patterns.

This study and research is based on the hypothesis that a systemic method and approach can be employed to do deal with and engage in interactions with city spaces and urban problems.

In this regard there is a review of the systemic approach and the way this approach helps explain and explore urban issues. Subsequently, a fresh theoretical framework is devised. Also in the first section the appropriate research methods for this study are explained.

The *Navvab Project* is a new urban project that has had a broad intervention in the urban context of Tehran. This study deals with this project as a model for assessing effective systemic functions in an urban system.

Tehran as a complex and multifaceted in the contemporary world was chosen as the field of study, within which the *Navvab Project* (comprising of several projects) was taken as the case study. In the second section the field and the case study are explained in detail.

Various research methods, including survey, documentary analysis and participation observation, were used in this study to provide a better understanding of these elements. After inquiring into the methodological approach of this project, its strong and weak points are highlighted, and finally, a model is presented for engaging with a city and its related issues.

The aforementioned research method, a combination of questionnaire, participatory observation, documentary and library methods, was employed to analyze the data obtained from the case study (section three) paving the way for further discussion and conclusion.

In the final section a conclusion is drawn based on the field work and case study; showing that a systemic approach provides a framework for understanding complex urban problems and formulating solutions but the resulting model is also convenient and practical, and provides a better vehicle for people-led urban planning than orthodox methods.

Through a systemic approach, in which the public domain and public space are considered as the bedrock of civic and urban life, a model is presented. This model attempts to introduce a system of producing and reproducing public spaces inside a city.

Together with the model, examples of its applications in solving the problems of the case study is assessed, indicating that the remaining opportunities, the unused and accessible locations in the *Navvab Project* can be used as a catalyst for producing new spaces and restructuring existing ones.

INTRODUCTION

Background

In the formation of the author's thinking and in his approach to the surrounding issues in the world and his chosen methods for solving problems, a number of factors, and backgrounds have influenced the development of his ideas, which will be dealt with under the following headings:

- Thought and Problem Formation
- Influential Individuals and Factors.

At first, this initial viewpoint towards the past and thought transformation may be considered as a personal biography, but a connected experience can be achieved beyond it.

Thought and Problem Formation

1. The first memorable experience in the public domain dates back to high school (1966-72). It was a distinctive school in which group and community work was mandatory. The atmosphere in the school was quite suitable for learning how aptitudes develop in the public domain and through group and social interactions, and how individual identity and privileges grow in a social context. It was not possible at that stage to perceive and understand the mechanism and procedure, neither was it possible to understand the reason and means of this development nor to analyse the process of this progress. Furthermore, there was no analysis on the author's part about how this appropriate and motivating atmosphere was managed and maintained. What he did observe was that every single student and his progress was carefully considered and supervised, nevertheless teamwork, and collective

intention was the basis of all decision making. There was no single "top student", and what really mattered was the incomparability and good performance of the group.

2. During 1972-78, study in the Faculty of Architecture, in the National University of Iran, its syllabus and academic relationships provided a new perspective and actually a second life chance. The syllabus provided an inter-disciplinary approach and the projects undertaken were mostly the result of students' group work. All the trips and frequent scientific excursions provided the possibility of collective experience, and the exchange of knowledge and skills. At the time, the Faculty of Architecture offered a most active, dynamic and diverse academic ambience. It was a place where the author's future professional nucleuses were formed.

   From 1974 onwards was the peak of the author's research work in the faculty. The attraction of research work and field studies, along with the innovation in presented projects seemed reasonably comprehensible; however, what did not make sense to him was the relation between the researches and studies, and the architectural plans. At the time, the author was regarded as being a newcomer in the field, and he could not dare to question this irrelevance, however, later, this became the main problem throughout his professional career. Trying to find a logical relation between various researches and studies undertaken on a specific subject, and the proposals for that subject, has proved to be quite difficult. In other words, there are insignificant relationships between the writing, graphs, diagrams, and plans in reports and the results that are drawn from them. Only through discussions and the exchange of ideas between experts, designers and researchers, could a very vague idea be figured out. The most successful plans and designs belonged to those who themselves took charge of the plans or the fieldwork related to the subject of the study.

   The author's latter days as a university student coincided with broad social developments in Iran, when new aspects of the public domain became open to public

participation and collective movements. The overall view of that era was akin to musicians of an orchestra harmonising their instruments to perform a cohesive piece.

The author spent the year after the Islamic revolution passing the final project and preparing his thesis for the master's degree. Influenced by the social circumstances, he was encouraged to undertake a project, the extension of which was unprecedented up to that day. The project, planning and designing Garmsar[1] region, involved 70 students at different levels, each assigned to take a part of the project. The result was, to a certain extent, satisfactory. The author's thesis and two of his colleagues were marked excellent and other students received a good mark for their participation.

The main positive outcomes of the project were having autonomy over the part of the work that each was responsible for but at the same time, each subsection was interrelated with the others, while being supervised by those upper-ranked groups. The flow of information and data between different sections was easy, those that were of use in macro planning were immediately made available and processed, and those generated by the author's group were sent to the appropriate subsections. In this experience, it was recognised that certain groups with diverse identities but at the same time with relative autonomy and self-determination, could produce mutual understanding and thoughtful behaviours and interactions. This teamwork made the author realise the vital role of public life and public space. On the other hand, the tangible aspects of this experience were designs that emphasised most on frame urban designs manifested in single buildings, the context of districts, planning in Garmsar region.

3. 1974 onwards: After graduating in 1979 and up to 1990, when the author was directly involved in urbanism and urban issues, he had different experiences. These experiences include: planning and constructing housing complexes in various parts

[1] Garmsar is a region east of the capital Tehran and part of Semnan Province.

of the country (Housing Section of Martyr Foundation Bonyad-e Shahid)), designing and planning the management of development projects for the country's endowments, managing the designing and construction process of school buildings in the northern provinces of the country. In all these tasks, his work interests have been followed and teamwork and inter-disciplinary activities have been used on various scales.

4. 1990 until the present time: There was a great enthusiasm after the Iran-Iraq war for the reconstruction of war ruins. This provided the author with the opportunity to be fully involved as an architect in the problems of urban planning and urbanism in a big city like Tehran (with great possibilities and great deficiencies). This was again an opportunity to follow up his interests and obsessions.

   In the 1990s, working in the decision-making sector for urban development, the author became fully aware of various urban problems and had to encounter them on different scales. This was when the following problems were encountered: how can one be sure about the estimates and what was the best method of approaching this? How was one to feel secure of the process of policymaking and decision-making?

   Tehran Engineering and Technical Consulting Organization (TETCO) was established in this period, as the department responsible for creating and providing urban plans. The author was appointed as the director of this department (with which specialists and consulting engineers were frequently in collaboration) and according to his experiences and managerial tendencies; the projects were assigned to different subsections and were harmonised to create an integrated plan. This attitude was approved by a board of directors, becoming the middle-range strategy of TETCO.

   With reference to the policymaking for urban problems, one group (among the directors, researchers and professionals) believed in documented planning for decision-making. The only means they had was the comprehensive plan of Tehran

(ratified in 1988) and its revised version (ratified in 1990), which itself was quite contrary to the factual dimensions (population, availability network and functions' view) of the city. As a result, their model of urban development (the new comprehensive plan of Tehran ratified in 1990) failed to meet the needs of the city. The other group, on the other hand, considered this macro strategic plan as a quasi-intellectual outcome of certain specialists and experts. They followed some dispersed and parallel activities, the result of which was nothing more than unproductive activities and a way of wasting energy.

Taking the urban management activities into consideration, together with the efforts of specialists and experts, and shedding light on the difficulties and crises that remain in the city of Tehran, one is tempted to suggest that all these attempts have acted as a tranquilliser rather than a remedy. This has typically made the problematic issues resistant to any reforms.

In conclusion, investigation into the following problems seems to provide clues to finding solutions to the above matters:

1. Why do technical decisions turn out to be inefficient in urban decisions?
2. What are the problems in the decision-making process that causes this inefficiency?
3. Is political decision-making involved in such ineffectiveness?
4. Are comprehensive and detailed plans and other urban plans, destined to share the same destiny?
5. Are the subjects in urban studies not adequately clarified?
6. Is the decision-making procedure relevant to the problems?
7. Can public and civil projects be carried out in non-public and non-civil domains?

Influential Individuals and Factors

In the process of problem formation, certain events and definite individuals have played vital roles. Their active presence and cultural importance in order of genesis is as follows:

1. The socio-cultural environment in which the author was brought up and where his beliefs and ideas were formed, have made him a person believing in a united worldview and holding the Islamic faith. From his early youth, he saw the universe in a cohesive order. Later, after becoming familiar with unity and diversity, this matter grew to be more attractive. Rumi's attitudes towards the universe and his attention to particles and the relation they have with the whole world and his perception of governing rules, has shaped and influenced the author's way of thinking. Religious intellectuals, for example, Iqbal Lahori, Seyed Jamal-e-din Assadabadi, Ali Shariati, Seyed Qotb, and their ideas were significant in deepening and developing his religious beliefs. It was because of their influence that he is constantly aware that, "God's hand is with the gathering of people" - an Islamic metaphor, indicating that life is motivated and innovated when people work together.

2. Reza Roozbeh our pious and cultured teacher, who was also the headmaster of Alavi High School, had an everlasting influence on the author and other students. He had some spectacular characteristics; his specialism was mechanical and nuclear physics, at the same time he had good knowledge of Persian literature, experimental science, algebra, and religious studies. His talks were comprehensible for every student. He made us realise that any factual phenomena is multi-dimensional and therefore, only multi-disciplinary knowledge is capable of understanding it. He was the first person in the author's life who created this sense in him that the interaction between different knowledge is only possible through the interaction between different fields of science.

3. Choosing a field of study in Iran has always been influenced by its social prestige and its future economic outcome. It was really because of this that the author chose architecture, without knowing much about its content. Being accepted in the university entrance exams had a momentous effect on his social and intellectual destiny. In this field, the interface of lines were encountered, levels and surfaces, colours, materials, shading, different issues and various fields. As a student, designer, and architect, he was always in search of new ideas and seeking to create something new, a work of art being the result of harmony, composition, relevance - the Garmsar project was an example of this kind.

4. Another influential figure was Dr. Mehrdad Basiri Gharib, a university lecturer in the history of arts, who opposed religious thinking. During the course, he constantly emphasised dialectical philosophical issues, Darwinism, and Marxism to analyse socio-historical matters. His ideas were not in line with the author's; nevertheless, he treated the discussions in such a way that everyone had the chance to express himself. It was here that the importance of the clash of ideas was realised.

5. In the late 1960s and early 1970s, there was a new wave of Islamic thought in Iran. Among the thinkers of this intellectual fashion, Ighbal Lahori (in philosophy and mysticism) and Ali Shariati (in social and religious issues) had prominent roles.

6. Before the revolution, two interest groups had dominated the academic domain. One was a laicist and Marxist group, and one was supported by the regime. This caused the students with religious and Islamic approaches to be under increasing pressure. The presence of Mr Mir Hussein Moosavi (an influential architect and artist who later became the prime minister for eight years during the Iran-Iraq war) as the assistant of Dr Tehrani (a compelling professor and one of the most

influential architects) was a good support for us to carry out our urban and architectural projects. Their encouragement was so effective that the author achieved the top mark (excellent 20) in two successive terms. Apart from this, their support gave us enough self-confidence to tackle big projects.

7. Dr Hadi Nadimi (the present director of Shahid Beheshti University) was in charge of the Faculty of Architecture at the time. He was also the author's supervisor for the Garmsar project. His advice and directions were quite caring and helpful.

8. The Islamic revolution had a direct and indirect impact on the life of many Iranians. Before the revolution, the author was thinking of continuing his study abroad or working in a consulting engineering organisation. No prospect of becoming involved in the civil service was evident. However, as he felt sympathetic towards the revolution and its objectives, he took managerial positions in some governmental organisations (e.g. Martyr Foundation, Housing foundation). In spite of working in the governmental sector, he always observed two points: to work in his own field and profession, and never to become a routine civil servant. He has been working in this sector for twenty years now without being fully involved in decision-making procedures in a way that would separate him from his field of studies, and he has remained independent, with no dependency as far as financial matters are concerned.

9. The Iran-Iraq war caused countless damage to our country. However, from the author's point of view, the greatest damage was depriving people of their involvement in decision-making procedures and their participation in the public domain. This resulted in the domination of governmental management in every domain and field. Because of the war, all the potential of the private sector was transferred to governmental organisations and departments. The author thinks this was the most harmful and damaging effect of the war. During the war, he

had witnessed the weakening of the public domain and the gradual loss of the atmosphere necessary for progress and development, similarly in the post-war era, a lack of development methods and backwardness in this regard was apparent.

10. In response to the accumulated demands for urban development, Mr Karbaschi was appointed as the mayor of Tehran. During the war, he was the governor of Esfahan province, where he proved to be a manager with specific characteristics (being talented, enthusiastic and popular). He began his work by attracting technocrats to the municipality organisation and commencing reformist acts. This soon elevated the urban management of Tehran to a distinguished executive, providing an opportunity for urban experts and specialists to carry out developmental projects. However, his role gradually faded by choosing inappropriate methods and approaches. His technical and construction deputy, Mr Ashouri introduced the author to this organisation and made his co-operation with this executive possible. These two persons are considered as influential figures in the history of development and construction planning in the city of Tehran.

11. Another key factor that has led to this study was the establishment of the Specialised Council of the city of Tehran and its close relation with TETCO. This put the author in regular and consistent contact with the specialists and experts in urban issues.

The Aims of Study

This study attempts to find a way to encounter urban issues and problems and then present a systematic method to investigate and deal with the problems of urban development projects, and to direct the execution of urban development plans in Tehran.

The problems which have been investigated can be summarised as follows:

- A lack of required progress in urban development and civic life in Tehran, in spite of its having all kinds of natural and human resources, compared with the developments other cities have achieved in the world today.
- An inability to execute urban projects which have been prepared for urban development. The one thing Tehran has - printed documents, which are kept in libraries and archives - and these have no practical value.
- An inability to overcome the problems encountered in dealing with urban issues and projects, as well as an inability to focus them on the defined development.
- An inability to remain up-to-date with the mechanisms and urban patterns used in modern methods.
- Delays and differences exist between different approaches in dealing with urban issues. The problem here is that the methods used in third-world countries like Iran, have already been proved wrong and abandoned by the developed countries. However, the mistake is being repeated instead of trying to remain up-to-date with the latest methods.
- Superficial viewpoints are adopted in dealing with urban issues and problems and simple and quick solutions are used when these issues are extremely complicated and require deep thought and attention.

The Main Question

Investigation and study of the aforementioned problems had led the author in this dissertation to consider the following questions:

1. What approach should be taken in dealing with urban issues and phenomena, to support the city authorities in finding a desirable solution?

2. What methods should be applied in order to deal with and resolve urban issues, to achieve interaction and balance between the realms of civic life and public spaces which result, ultimately, in the development of civic life?

3. How can we plan and present a simple, easy-to-implement programme to deal with complicated urban phenomena which would result, ultimately, in the development of urban and public spaces?

By investigating and focusing on the above questions, we are brought to this key question:

Is it possible to achieve a systematic approach to understand public spaces and spheres and reach, ultimately, a solution to the problem?

In order to find answer to the above questions and other questions of the same nature I would like to have the following hypothesis as the basis of my research, in other words this dissertation would like to prove that:

A systematic approach and a systemic way of addressing a city and its issues can be employed to create a model to solve, direct and control urban issues.

This study is an attempt to investigate the problem, reach an answer to the key question and find the chief characteristics of the required system that could approach and deal with urban issues.

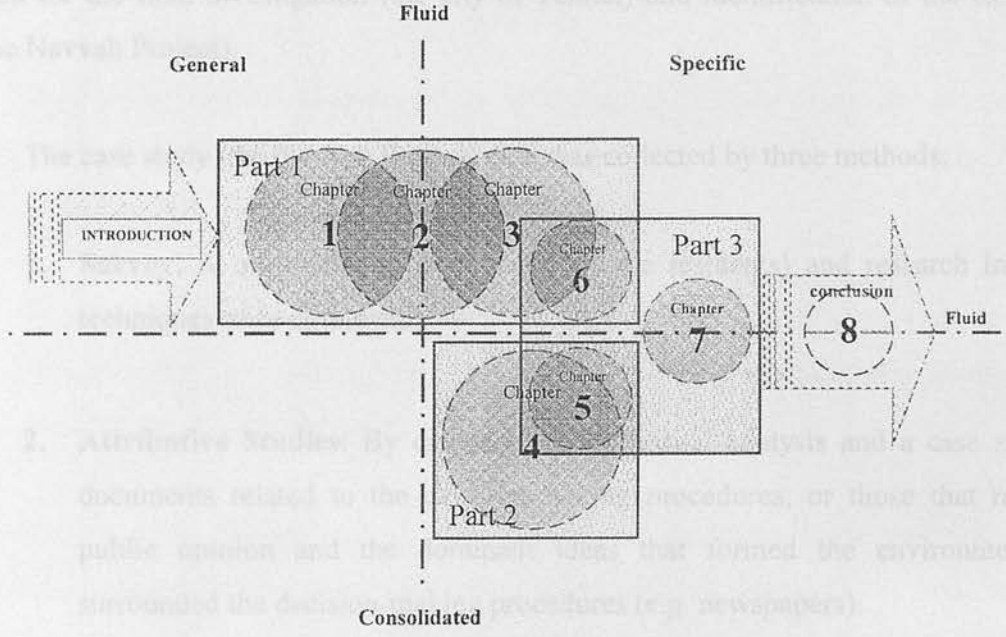


Figure 0-1 The Structure of Thesis and The model of Study

Problem-Solving Approach

Research Methodology

The importance of development and change is being felt more and more in cities and urban structures and the processes required for urban development should receive due care and attention. For this purpose, apart from architects, the help and contribution of all, including sociologists, political scientists, economists and historians is also needed. The research can be undertaken in various ways, depending on one's strategy and approach in dealing with the issue. If we consider the process of doing research as a multi-layered circle, the more relevant the information is, the closer we are to the centre of the circle. The factor of time should also be taken into consideration.

At first, a comprehensive library search was undertaken by the author on the written documents and certificates, taking advantage of all kinds of books, the press and media and administrative documents, so that an acceptable viewpoint and ground theory could

be obtained and organised in order to confront the city. The above study method was also used for the field investigation (the city of Tehran) and identification of the case study (the Navvab Project).

The case study (the Navvab Project) data was collected by three methods:

1. **Survey**: A questionnaire (completed by the residents) and research interview techniques were employed.

2. **Attributive Studies**: By carrying out contextual analysis and a case study of documents related to the decision-making procedures, or those that reflected public opinion and the dominant ideas that formed the environment that surrounded the decision-making procedures (e.g. newspapers).

3. **Observation and Field Studies**: There was an opportunity to be involved in the decision-making procedure of the city of Tehran (generally) and the Navvab Project (in particular). The author took this opportunity to record his observations.

Structure of Study

In Part One, Chapter One, the result of the investigations on viewpoints and approaches in general and the approach towards urban and urbanism in particular is discussed. It mainly considers the explanation of the systematic approach. In Chapter Two, the development and interaction of ideas in dealing with urban issues is examined. There are two major turning points in this regard, namely, the Athens Charter and the 2000 Charter, which will be discussed and compared with each other. Finally, in Chapter Three, a theoretical framework is presented, building on the knowledge gained from the facts in the previous chapters.

In Part Two, Chapter Four, The Navvab Project is presented and investigated as a particular case study. We will see it as an executable idea and project.

Part Three has been dedicated to analysing the survey and documentary data (Chapters Five and Six) and participant observation (Chapter Seven) by applying techniques and methods used in performing the research.

In the conclusion, (Chapter Eight) the study will try to establish a space to interact with the gathered data, information, viewpoints and approaches that will finally lead to the emerging model, which will try to answer the main question.

Finally, a few steps have been taken towards future measures and what can be done in this regard (8.5 Future Measures-Recommendations)

Part One

General Background

- Introduction
- Systemic View ..... Chapter One
- Involvement in the City ..... Chapter Two
- Framework and Methodology ..... Chapter Three

Introduction

To lay the bedrock for carrying out the research on the subject matter the following steps were taken:

First Step

The study of towns and regions requires an insight into the relationships between the facts about a city or region, and into discovering the most effective methods and techniques for controlling them.

This section shall apply systems theory to the city and region, and to civic life to measure the general specifications of urban systems and foresee the evolutionary characteristics of urban and regional systems. Through this approach, civic life (as a complex system and complicated organisation that embraces various subsystems, namely the public spheres, and economic, social and political activities at different levels and a variety of issues) can be studied. Meanwhile, this approach would enable the study of the physical manifestation of civic life in urban space. In so doing, this study may direct and control these systems and their successive development.

To present and clarify this viewpoint and approach, a revision of the texts and books that were essential to the author's ideas was required, including the philosophical thought of Mullah Sadra, Sohrevardi, Mullah Hadi Sabzevari, Ali shariati, Mohammad Iqbal, Mehdi Bazargan, Allame Tabatabaei, Mohammad-Taghi Jafari, Seyed-Hassan Nasr, and more contemporary thinkers like Mohammad Mojtahed Shabestari and Abdol-Karim Soroush. Of these, *The Principles of the Realism Philosophy* by Allame Tabatabaei (with notes and comment of Morteza Motahari) and also the valuable interpretation of *Nahj-al-Balaghe* and Rumi's *Masnavi-ye Manavi* had a key influence on the author's way of thinking and his adoption of a systemic approach towards the world. Also of vital

importance has been his study of western thought and its interaction in the twentieth century with eastern traditions and the reciprocal influence of atomism and holism.

This way of thinking and these particular interactions throughout the years has led the author to the ideas and visions of Edgar Morin, but the ideas and viewpoints of Benjamin Reif, George Chadwick and JD McLaughlin have provided the author with a key set of definitions about the city and urbanism on the basis of a systemic approach. Few references were found in the East and eastern ways of thinking regarding the city and urban life in its modern sense, apart from Ibn-Khaldoun (1996).

From this view, all land and space uses that make up the totality of a city or region are studied and if a new demand such as a new land or space use should arise, it would be sufficient to direct that land or space use from its present state to the desired state.

If the totality or wholeness of a city or region is to improve, then each one of the land uses or spaces has to be identified and changed to the desired state.

This approach to towns and regions and to the related problems is based on a certain view that is known as an atomistic or reductionist view. According to this view:

- Every entity is the sum of its parts that constitute it;
- No change can be made in the entity except by making appropriate changes in its parts or elements that make it up;
- To make a desired change in an entity, one must first gain an adequate understanding of the parts. Indeed, it is only through an adequate knowledge of the parts that one can understand the whole;
- Finally, any desired change in the entity can only be brought about through appropriate changes in the parts.

This view prevailed throughout history, and there were developments and improvements that accompanied it, forming the basis of planning in almost every area, including city and regional planning. It prevailed in dealing with problems facing cities, such as slums, waste disposal, housing for the working class, bad access ways etc., which were the first problems to be dealt with in city planning, especially in the seventeenth, eighteenth and nineteenth centuries, when the industrial revolution resulted in the first serious city development programmes.

Slums were improved and turned into proper houses, wastewater was channelled for proper disposal, and the old and decaying quarters of the city were renovated to provide housing for the poorer classes. However, each problem was dealt with individually and left at that.

These efforts solved certain problems, but at the same time created many others, which were again dealt with as individual cases. There were, of course, certain people with insight who maintained that these problems had to be considered all at once and the city or region as whole entities, but in general, they were not taken seriously.

From 1940 onwards and since 1960 in particular, a revolution occurred in scientific thought, culminating in the "general systems theory" of Ludwig Von Bertalanffy, the renowned Austrian biologist, who in 1968, presented a lifetime's work on organisms as a theory that subsequently, has revolutionised all areas of science.

General systems theory is based on a holistic or organic view in which:

- Every entity is a system in its own hierarchy of systems, made up of a number of smaller systems or subsystems, but is not simply the sum of these parts;
- Any development in any system is the result of its dynamism which is determined by internal and external (or environmental) conditions;
- A good cognition of the subsystems does not necessarily lead to an adequate cognition of the whole system and any operating system has its own peculiar

characteristics independent of and often different from the characteristics of its subsystems; and finally,

- A change in any system is the reflection of the changes in the system, which may occur through dynamism.

Once this theory was published, it rapidly spread to other areas of science and research including psychology, sociology, anthropology, linguistics, medicine, pharmaceutics, geography, architecture etc., revolutionising all areas of science and knowledge. One of the areas of study which was deeply affected by this view, particularly from 1970 onwards, was study of towns and regions, generally known as urban and regional sciences.

Second Step

The author's next step was to search for the origin of urbanism and study the background of involvement in city and urban issues. This bore a resemblance to the way of thinking and the worldview I was pursuing. I came across two milestones that were based on two different approaches, both of which were the result of specific conditions. One was modern urbanism and architecture, in the form of the CIAM group, which at its peak resulted in the Athens Charter in 1933. The other was, a reaction to this group, an anti-CIAM movement in the 1950s manifested in various forms, the most cogent and lucid of which was the structuralism approach formed at the Othello Conference in 1959 that was attended by prominent figures, such as Louis Kahn, Kenzo Tange, the Team ten, Georges Candilis, Shadrach Woods, Peter and Alison Smithson, Jaap Bakema, Aldo van Eyck. Through changes in urban planning and designs since the early 1960's, a coherent approach towards urban issues was formed which in turn led to the 2000 charter.

In this section the author traces the transformation that occurred in urban affairs and urbanism by concentrating on two pivotal points, namely the Athens Charter and the 2000 Charter. In addition, he pays attention to town planning through the transformation period of the 1960s and emphasises some milestones in this period.

What has been dealt with in this section, under the title "Involvement in the City" is a comparison between the Athens and 2000 charters. In addition, the work of Haussman in Paris has been considered because of its large scale, as a centralised and authoritative approach, and due to its occurrence in the pre-modern period. Reference is also made to the modern movement and the Athens Charter, and subsequent to considering the events of the 1960s, the 2000 Charter is examined.

Then, through a comparative survey, by presenting the statements of these two charters plus current urbanisation methods, solutions and the measures exercised in Iran-Tehran during the Iran-Iraq war, the main purpose of this study will be addressed. Finally, by examining the relationship between original theories and the theories resulting from the above discussions, and presentation of a theoretical frame, the author will establish theories in order to find appropriate solutions and methods of involvement in the city (conducting and housing order for the urban development in Iran).

Some methods of interaction with the city that are largely related to postmodernism are also considered in this study. The major part of this way of thought belongs to structuralisms and those who dealt with the city in a systemic approach.

Kenzo Tange in an article entitled "Function, structure and symbol" described the change in his attitude from operational to structuralism. Being against fixed planning, he stated: ' The main ground of urban planning is thinking of a spatial organisation as a network of relations and as living organism which grows and develops. This is the way of thinking that I call *structuralism*.'

Edmund Bacon is one of the few scholars and theorists who had this opportunity to put his theories into practice. In *Design of Cities* (1997), he says:' in order to have influence on the growth of a city, urban planners must initially have a clear idea about the structural framework of the city. It is through this clear idea that the process of urban

development can be carried out.' Simplifying this idea he says:' although the leaves come down every fall and grow every spring, the tree itself, the branches and the trunk remain to determine the ultimate form of the tree.' He further adds:' the form of a city originates from the structural framework of it, rather than dictating it. In other words the model and the pattern of a city are unique to that city.'

Christopher Alexander, taking a view that is close to structuralism, employs the tree metaphor, implying a hierarchy, to talk about his ideas. In 'A City is not a Tree'[1] he emphasises that cities do not have a hierarchical characteristics and if urban planners had this assumption, the result would be inefficacious streets, commercial districts and open spaces. In favour of organic cities and opposing the artificial unauthentic cities, he argues that ' rather than having a tree-like structure the cities have a quasi-network structure. Not only have they a tree-like structure, they are to be seen as objects. A city is a set of perspectives. Part of each characteristic overlaps with parts of others.' Having a systemic approach towards the city in the introduction of this book he states that 'every pattern can continue to exist as far as it is supported by other patterns, which can be larger or at the same level or scales, or even smaller in size and dimension. In other words, when something is formed, it cannot be re-formed so that it can be easily substituted. This is the Gestalt method in urban planning and design.'

Jane Jacobs looks at the city from a systemic and sociological point of view and in her works sets out to analyse the urban structure and public space. She believes that the 'city is a social organism consisting of functioning units'. By this, she emphasises stopping the process of distinguishing functions in urban planning.

Rob Krier (1996) in objection to the period of modernism states: 'considering the extinction of the totality of cities, through the division of functional units, the city has become disintegrated and its element cannot form a unified system.' He criticised the

[1] Alexander *et al.* 1994

urban engineering proposed by the Athens Charter and invited the engineers to form systems in architecture.

In 1974 *The Sense of Unity*, by Nadir Ardalan and Laleh Bakhtiyar, to some extent they put forward the same proposition in the context of Islamic-Iranian architecture and at the same time presented the basis of Islamic thought and worldview in this regard through the unity and plurality debate.

In this respect the author has recently come across the ideas of Tom Turner in *City as Landscape,* Ian Bentley in *Urban Transformations Power, People and Urban Design*, finding a framework for new thinking about the transformation process of urban settings and spaces, and new ways for the collaboration of experts and specialists on the one hand and the public on the other, for a stable and sustainable urban environment.

Turner has a complex and systemic approach towards the city. By employing the metaphor of a nesting woman and a hunting man, he assumes the city to be providing scenes for nesting and hunting. He welcomes modern technology and geographical information systems and heralds a systemic involvement in the city which is based on modern technology.

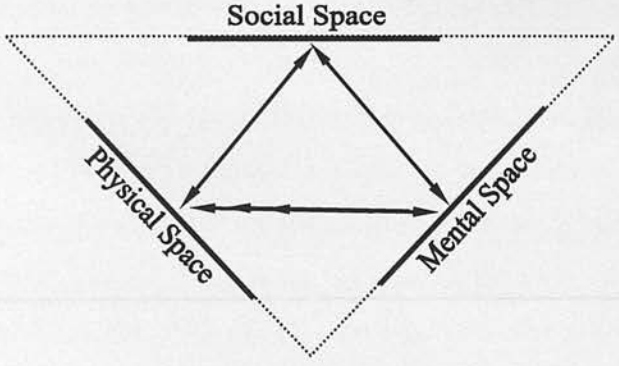
Some Iranian think tanks and scholars have been working on urban issues, who have proposed some thought-provoking opinions and have inspired new ideas. Mohsen Habibi (1999), Seyed Hussein Bahreini (1998) and, Mohammad Mansour Falamaki (1988) are among the most influential figures in this regard whose ideas are quite conversant with new developments in urban issues.

Third Step

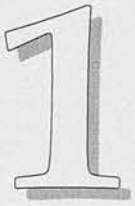
In order to form a theoretical framework for this study, the author initially looked at the general systems theory of Talcot Parsons to show that rather than having a single

evolutionary process following any macro courses, such as technological change, or economic individualism, a far wider set of elements have been involved in the process of urban change. A city as a social organism has to perform basic social functions if it is to survive. By presenting and focusing on the four functions of **adaptation**, **goal attainment**, **integration** and **latent pattern maintenance** as in the Parsonsian approach; the author intends to provide a comprehensive account of the challenges faced by actors in a system.

On the other hand because of the fact that a system is indisputability dependent on the encompassing spatial elements, the issue of an urban setting as a system is combined with a spatial approach to urban settings. For this purpose, the analytical approach of Henri Lefebvre was employed, first to distinguish the combining elements of an urban space, the initial function of which is finding a location for social interactions, and through this to focus on the relations of spaces. These spaces, according to Lefebvre, form a triangle that each of its vertices has bilateral relations with one another.



It is assumed that by employing a systemic approach to understanding the internal elements of a system, and the spatial approach to the external elements involved in forming an urban space, a useful theoretical framework is provided for analysing the relations of these elements and presenting possible formulas for beneficial involvement in urban settings and urban affairs.



CHAPTER ONE

SYSTEMIC VIEW

CHAPTER ONE
1. SYSTEMIC VIEW

1.1 History of Systems Theory

1.1.1 The Atomistic View

The "atomistic" view first emerged in ancient Greece. Philosophers such as Leucippus (fifth century BCE) and Democritus (460-371 BCE) considered the world to be made up of an extremely large number of discreet and indivisible participles, called atoms. Pythagoras (570-500 BCE) and Plato (427-347 BCE) were among others who followed almost the same line of thinking.

Among Muslim scholars, too, the prevailing idea was that the world was made up of the smallest, indivisible particles, the leading group among them being followers of Abolhassan Ashari, the Ashaarieh (ninth and tenth centuries ACE). Ashari considered the world to be made up of atoms of events all of which were separate and independent but which all were related to the same single origin, the Almighty God.

The atomistic school was not as influential in the Middle Ages, down to the fifteenth century. This was mostly because of the domination of the church, which opposed research and enquiry. However, from the latter part of the fifteenth century and with the emergence of the Renaissance in Europe, the thirst for exploring and finding out facts and truths went out with the Church's control and once again, the atomistic view came to prominence. Among the scholars who advocated this thinking were Francis Bacon (1561–1626), Galileo (1564–1642), Descartes (1696–1750) and Dalton (1766–1844).[1]

[1] Shahidi, M.H. (1991), pp. 4-5 – Mohammad Hossein Shahidi (1968-), B.Sc in Social Sciences, M.Sc in Sociology 1977, Tehran University, M.Sc in Urban Regional Planning 1980 Art Faculty, Tehran University, Post graduate in Town & Regional Planning 1985, Visiting Professor of Systematic approach in Urban & Regional Planning, Faculty of Architectures and Urban Planning, University of Shahid Beheshti (1990 -)

1.1.1.1 The Organic View

The organic view too has a long history, and although it differs considerably from the atomistic, both two share one basic principle: a general or collective view of the world and facts and realities. In the organic view, the world – and existence in general – is not the sum of its parts but a collection of varieties and diversities that inherently and substantially are related. Through these relations a unit has emerged which, despite the variety and the diversity within it, follows a single, common and general trend towards a single destiny. The organic view has deep roots in Chinese, Indian, Iranian and Greek thinking and cultures, Taoism of the Chinese being a good example.

Scholars who follow the organic school consider the world to be a collection in which the hierarchy of existence is shifting towards ultimate perfection. Each part of the world and each creature in it, is itself in a world of its own, with a part that it plays in the world of existence. Each part, as well as the whole, is after an ultimate goal, which is the natural law that governs organisms. In this mode of thinking, in addition to nature as a whole, the parts that constitute it are subject to certain laws, which, like nature itself, are hierarchical; a hierarchy whose levels are linked to the substance of existence.

The Neo-Platonist view, which is a blend of Greek, Christian and Eastern schools, is also organic. The Universe of Ideas (Mosol) in this view is made of links in the world of the senses; links are also hierarchical and connect all the things and creatures to each other and to the visual world. In this school, the pantheism of the stoics turns into a view of the world whereby the world is strongly governed by certain entities that originates from outside of nature.

In the Muslim world, the organic view is deeply welded to pantheism and stoicism. The Muslims, as monotheists, gave new life to the organic view. In this modified view, the world is a unity that is the reflection of the Almighty. Existence has a hierarchy with

lifeless objects such as stone and clay at the lowest level, below animals, which form the next higher step and human beings at the top.

Sohrevardi's school of illumination and the existentialist or unitary school of Mowlana, Molla Sadra and Molla Hadi Sabzevari share an organic view which is evident not only in their philosophical works but in their literary writings as well. Perhaps the best example would be the story of the elephant in total darkness, which Mowlana has expressed in poetry.[2]

1.1.2 Current Scientific Trends (Background to the Emergence of Systems Theory)

The reductionist view had certain consequences, the most notable of which was the division of knowledge into distinct and separate fields, each of which reduced matters to parts and attempted to gain cognition of these parts through causality. This way of thinking went so far as to influence such non-material areas of study as social sciences and psychology. The most important reason why this thinking gained ground was that it speeded up scientific development, especially following the Industrial Revolution. It suggested "material atoms" in material sciences, "behavioural atoms" in behavioural areas of study and "social atoms" in social sciences.

In the nineteenth century, all sciences faced certain common shortcomings and difficulties despite the fact that they were remote from one another. All these difficulties emanated from one single problem: the assumption hitherto held that wholes could be understood from knowing the parts. The problem was most severe in the area of biology.

In the eighteenth, nineteenth and especially the twentieth centuries certain developments occurred in the sciences which intensified the inadequacy of the reductionist view. The most outstanding of these developments were the general theory of

[2] Shahidi, M.H. (1991), pp. 6-8

attraction by Isaac Newton (1649-1727), the theory of relativity by Albert Einstein (1879 -1955), the Heisenberg Uncertainty Principle and the Max Plank Quantum Theory. The existence of atoms was proved and the question of combinations of entities in general was given greater attention. The deterministic causality view gave its place to reciprocal causality or in-deterministic view; agent and determinism replaced cause by probability. In physics, the possibility of the transformation of energy into matter added to the idea of a one-way transformation of matter into energy, as well. Electrons came to be considered as wave-like in behaviour moving in random, haphazard orbits and in jumps, according to the laws of probability.

According to traditional thermodynamics entropy, a measure of disorder was on the rise indicating that total existence was ageing and approaching extinction. Modern thermodynamics suggests the concept of negative entropy, neg-entropy, or synchrony, which means that there is a simultaneous tendency in all systems to be dynamic and to seek restoration of order and regulation. This development in physics led to concepts such as generality, order and organisation, indeterminism, reciprocal relations and connectedness in all things.

In biology, Darwin's theory of evolution presented living creatures as evolving with time, and the organic view replaced the mechanistic view. In this view, a living creature is a system, which despite the validity of entropy can avoid disorder and destruction through exchanges of energy and information. The living organism, in this view, is a whole that is not the sum of the attributes of the parts but that of systemic combination that makes the whole. Concepts such as "wholeness", "hierarchy" and "dynamism" became generally used in biology.[3] In this view there is no static stability in living creatures and every living thing at any moment is "becoming" and finds its stability in its dynamism shifting from order to disorder and vice versa. Living things are under the influence of forces because of which life keeps living things in dynamic stability and

[3] Shahidi, M.H. (1991), pp. 7-10

gives them existence and identity. Living organs are under the influence of two conflicting forces that interact with one another. On the one hand, there is the force that tends to age the organ and drive it towards disorder and destruction. On the other hand, there is the force that organises and eradicates disorders. Thus, the living body can survive and adapt itself to the environment.

The organic view revolutionised psychology and sociology. In psychology, it led to the development of the Gestalt view and approach, which suggests that the human psyche is not the result of the physical and chemical reactions that take place within the body. Besides, it maintains each state is meaningful only when it is considered in relations to the psychic state as a whole. The organic view also resulted in the concept of social physics, proposed by Auguste Comte (1798-1857) to give its place to the idea of 'wholeness', which is something beyond a simple collection of individuals. The organic view prompted such great thinkers as Emile Durkheim (1858-1919), Karl Marx (1818-1883), Max Weber (1864-1920) and George Gurvitch to lay the foundations of modern sociology.

Furthermore, it was recognised that necessities in one field of science need the help and cooperation of other areas of knowledge. Hence, more attention was paid to coordinating sciences and paying attention to the features that are common among them. In city planning, for example, the decision-makers realised that attention must be paid to such issues as soil mechanics, hydraulics, physics, chemistry, etc. all at the same time, in order to decide properly on the right solution. And to decide on the issues related to the traffic one has to consider such matters as physics, mechanics, economics, sociology, population, probabilities, mathematics etc., especially in case of large-scale projects.

This trend in turn led to the emergence of interdisciplinary sciences, such as biophysics, biochemistry, genetic engineering and so on. In management, military operations, implementation of industrial projects, production of complex products, etc.

such new scientific disciplines as 'operation research', 'cybernetics', 'information theory', 'game theory', 'automation theory', and 'cue theory', emerged.

The atomistic view reduced the universe to its smallest parts and put the human being at the very centre of existence. But it neglected the origin of life, value systems and ethics with the result that there came about a chaos in values and ethics which manifested itself in the emergence of such schools of thought as nihilism and anarchism that prevailed in academic and scientific circles following the two world wars.

The organic view changed all that and led to the emergence of the 'unification of science' and, ultimately, to the systemic view of the universe.

1.1.3 General Systems Theory

Ludwig Von Bertalanffy, the famous biologist of Austrian origin, laid down the foundations of the general systems theory. He maintained that an organ is not simply the sum of its parts, nor does it operate under the influence of external factors only. Rather it is a 'whole' that cannot be understood from its parts in a static set of conditions. It must be studied as a whole, and as a dynamic entity. His ideas led such great men as K. E. Boulding, A. Rapaport and L. Russell Ackoff to reconsider biology and other areas of science. Thus, the organic view of nature emerged as a new way of thinking about the world and life, in the twentieth century.

Bertalanffy maintained that the new systems theory originates in the thinking of Ibn-Khaldoun and Nicholas of Cusa in relatively ancient times and Leibniz in the seventeenth century. In fact, it goes back to earlier times. The organic theory and the systems view rapidly spread to all areas of science. They had such an impact on sciences, especially on

technology and industry, that Norbert Wiener called them "the second industrial revolution".[4]

1.1.3.1 Principles of General Systems Theory

A system is defined as "a collection of elements or subsystems with a network of reciprocal relations that work together towards a certain goal". This is the most commonly accepted definition of systems. According to this definition, the major concepts in a system are the wholeness of the system, the subsystems, the goal and the relationships among the subsystems.[5]

1.1.3.1.1 Wholeness

"Wholeness" is the basis of the systems view. The theory maintains that, contrary to the reductionism approach that divides an entity into its parts and tries to understand the entity through understanding its parts, the entity must be understood taken as a whole because a whole entity has characteristics that are its own and not shared with the parts.

1.1.3.1.2 Elements or Subsystems

Subsystems or elements are the parts that make up the system together with the relations among them. However, the identity of the subsystem, which is usually itself a system with subsystems, is the function it performs and the role it plays. The elements do not have to be of any particular kind, what is important is the effect they have on the system as a whole.[6]

1.1.3.1.3 Interactions

[4] Bertalanffy, Ludwig Von, (1973). pp. 9-13

[5] Reif, Benjamin, (1973). pp. 2-25

[6] Reif, Benjamin, (1973). pp. 4-7

The network of reciprocal relations or interactions among the subsystems is the main factor in the formation and nature of the system. Not until these relations and interactions come to work, can we say that we have a system. It is important to note, however, that relationships and interactions must be sustainable and long-term. Exceptional or haphazard behaviour cannot be considered as proper relationships.[7]

1.1.3.1.4 Goals

The interaction network that comes to exist between elements always has a certain goal and reason for its existence. What is important to the system analyst is this very goal or objective. The goal can appear in different forms:

- State Maintenance: the goal of the system might be a reaction to internal or external conditions in order to preserve a certain state of affairs.
- Goal seeking: a goal-seeking system, unlike a state maintaining system, reacts to one or more new internal or external conditions that provide one or more appropriate responses for the different conditions.
- Multi-purpose systems: these systems are simple goal-seeking systems, which can in two different states attempt to achieve two or more goals.
- Ideological systems: these systems are able to choose certain goals in different ways and under different circumstances. They can change their goals under constant conditions.

1.1.3.1.5 System Formation

Because a system cannot exist through a collection of elements alone, it is necessary to discuss the development of systems, stage by stage. Beer proposes that there are four stages in the development of a system (Figure 1-1):[8]

a) Collection of dissimilar

[7] Reif, Benjamin, (1973). pp. 5-13

[8] Reif, Benjamin, (1973). pp. 9-11

b) Assemblage of dissimilar
c) Systemic assemblage of dissimilar, and
d) The dynamic system.

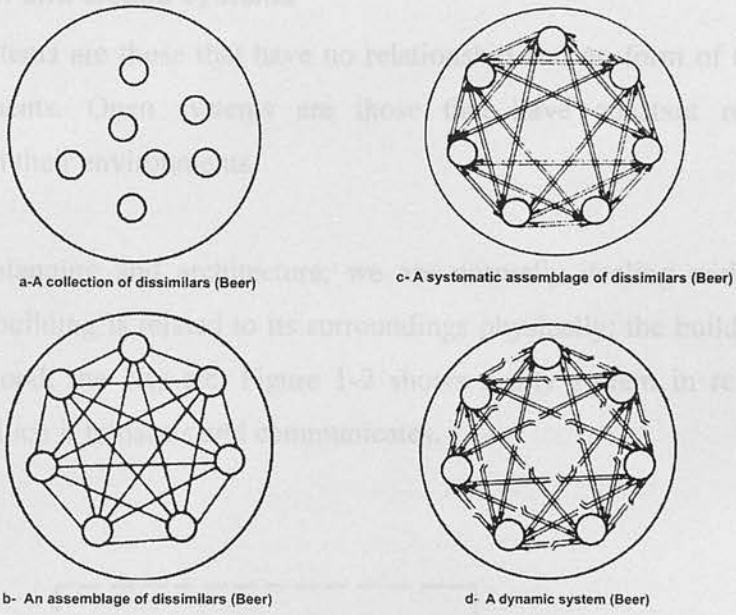


Figure 1-1 Stage for Recognition of System
Source: Reif, B. (1973), pp.10-11

To explain his view he gives an example of a collection of seven elements and shows that there can be as many as two elements to the power of 42 possible systems within this collection.

1.1.3.1.6 Environments

In systems theory, the environment is defined as all the external systems that can affect the system in question through changes in their attributes or that are affected by changes in those of the system. A system's environment must be limited, however, as the number of external systems and super systems that might affect the system may be very large. The analyst dealing with a system confines himself to those systems that are of significance as far as the analysis, aim and analyst are concerned. Furthermore, although most systems are inherently open and interact with the environment freely, again the

analyst must confine himself with those that are significant to the analysis. He also must consider the system and its environment as being abstracted from the rest of the universe.

1.1.3.1.7 Open and closed systems

Closed systems are those that have no relationship and no form of transaction with their environments. Open systems are those that have constant relationship and transaction with their environments.

In urban planning and architecture, we are normally dealing with open systems because every building is related to its surroundings physically: the buildings close to it, the neighbourhood, the city etc. Figure 1-2 shows a city system in relations to other systems with which it transacts and communicates.

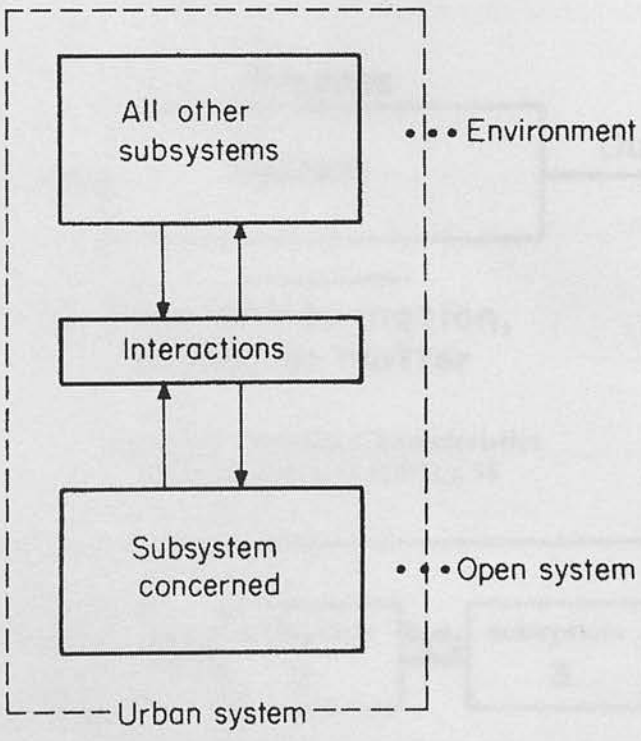


Figure 1-2 The Subsystem Concerned as an Open System
Source: Reif, B. (1973), p.28

In the physical and mechanical domains, the openness of the system is not absolute and, therefore, we can put such systems into three categories:

a) Systems that are totally closed;
b) Systems that are totally open; and
c) Those which are relatively open or closed.

1.1.3.1.8 Inputs and Outputs

When dealing with open systems we can identify two forms of interaction: those that affect the system, which we call inputs, and those that issue from the system and affect the environment, the outputs. As each system occupies a position in a hierarchy of systems, inputs and outputs can be extensive and complex. Therefore, the analyst must identify the inputs and outputs that are relevant to his study. This is shown in Figures 1-*3* and 1-4, below.

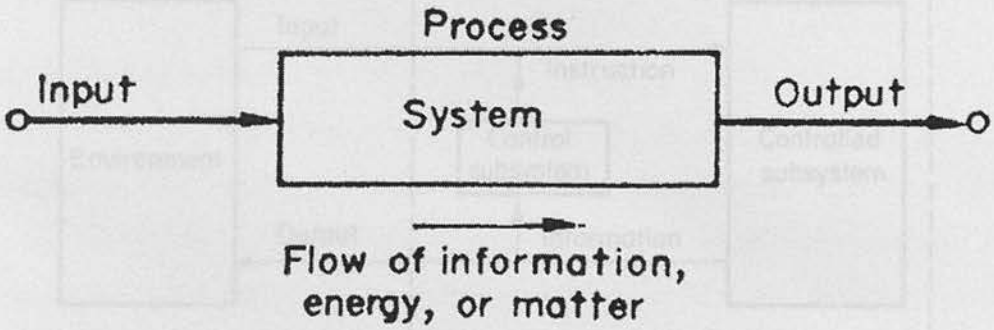


Figure 1-3 Systemic Characteristics
Source: Chadwick, G. (1971), p.38

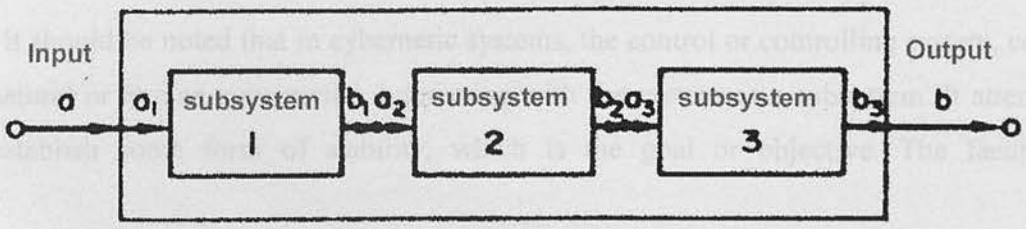


Figure 1-4 A Simple System with Input a and Output b
Source: Chadwick, George F. (1971), p.39

1.1.3.1.9 Systems with Feedback

Some systems have the property of using the inputs to modify the outputs. These are called systems with feedback. In some systems, the inputs feed the system with control information, i.e. data intended to act as control measures. These systems are generally known as information feedback systems.[9]

The concept of information feedback in the systems theory has led to the field of cybernetics, which is presently of significant and extensive use in many areas of science and technology. Beer suggests that there is only real control when the system is an organic whole. Cybernetics is mainly concerned with complex, probabilistic, and adaptive systems.[10] The control mechanism and the controlled mechanism are two cybernetic elements as shown in Figure 1-5.

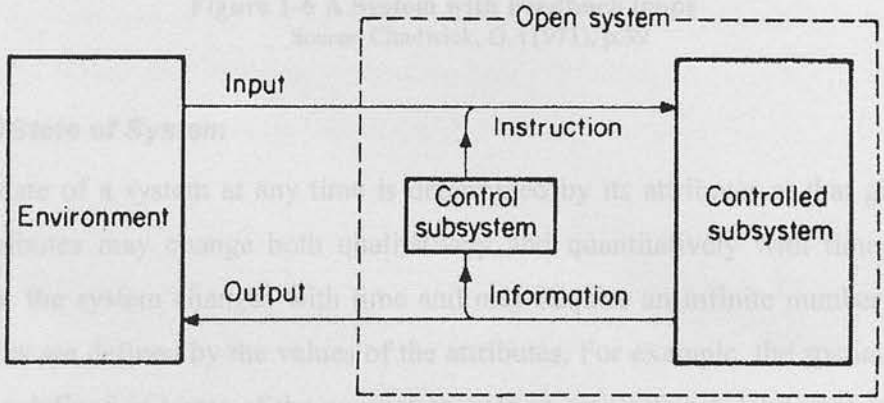


Figure 1-5 An Open Adoptive System and Its Environment
Source: Reif, B. (1973), p.15

It should be noted that in cybernetic systems, the control or controlling system, could be natural or human-constructed, interacting with the system as a subsystem. It attempts to establish some form of stability, which is the goal or objective. The feedback

[9] Reif, Benjamin, (1973). p. 13

[10] Reif, Benjamin, (1973). p. 15

mechanism compares the inputs with the system criteria set and whenever there is a deviation from normal trends, measures the deviation and rectifies it. It is also a means to materialise the objective measures of performance methodologically. At times there are complex networks of feedbacks among the subsystems of a system with the inputs of the subsystems being fed back to the same subsystems while the main process of the input is the main output of another subsystem. Figure 1-6 illustrates this complex process in case of simple system.

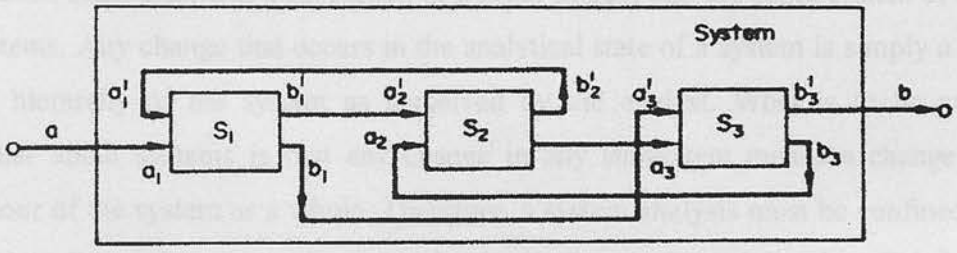


Figure 1-6 A System with Feedback loops
Source: Chadwick, G. (1971), p.39

1.1.3.1.10 State of System

The state of a system at any time is determined by its attributes at that given time. These attributes may change both qualitatively and quantitatively with time, and this means that the system changes with time and may acquire an infinite number of states. These states are defined by the values of the attributes. For example, the spatial state of a city can be defined in terms of the population, rate of employment, land uses, congestion etc. The transportation system of a city can be defined in terms of the number of vehicles operating in that city, the roadway network, public transportation facilities etc.

Because systems can acquire infinite number of attributes, they can have infinite numbers of states. However, to offer a systemic description of the state of a system at any given time, we must confine ourselves to those subsystems that are directly relevant to the study and analysis being performed. For example, when we are considering the

macro-spatial system of a city we must only concern ourselves with macro-spatial attributes and ignore the micro-spatial aspects.[11]

1.1.3.1.11 Analytical Level

The universe is a system comprising a very large number of subsystems each of which is a system in itself with a large number of subsystems. Dealing with systems requires a level of analysis that is appropriate with the level of the system in the hierarchy of systems. Each system is a subsystem of a super system and the super system of its own subsystems. Any change that occurs in the analytical state of a system is simply a change in the hierarchy of the system as perceived by the analyst. What is to be noted in particular about systems is that any change in any subsystem means a change in the behaviour of the system as a whole. Therefore, a system analysis must be confined to the behaviour of the subsystems relevant to that level of analysis, and no other. This is why a system being analysed as part of a super system, not as regards the elements within, it is often called a 'black box'. This means that we deal with black box systems irrespective of what goes on within each, and only consider its inputs and outputs.

The concept of the level of analysis leads to two further concepts: vertical and horizontal structures. Vertical structure means that we have to pass from one level of organisation to the next. However, a system must also have an optimum horizontal structure. In a business firm, for example, there must be an optimum proportion between the different specialists such as the accountants. clerks, sales persons etc.

Figure 1-7 illustrates a system structure both horizontally and vertically. It shows the outline of a system that has three hierarchical levels of analysis and the optimum size at each level. It also shows the horizontal relationships between the subsystems and the vertical structure passing from level one to level three, which must be through level two.

[11] Reif, Benjamin, (1973). p. 14

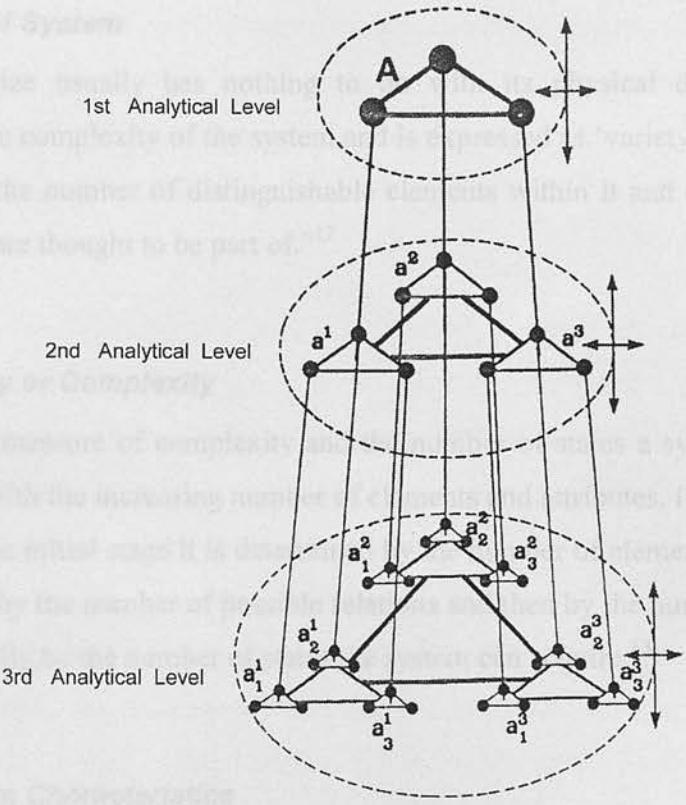


Figure 1-7 Ranking, System Vertical and Horizontal Structure
Source: Shahidi, M.H. (1991), p.34

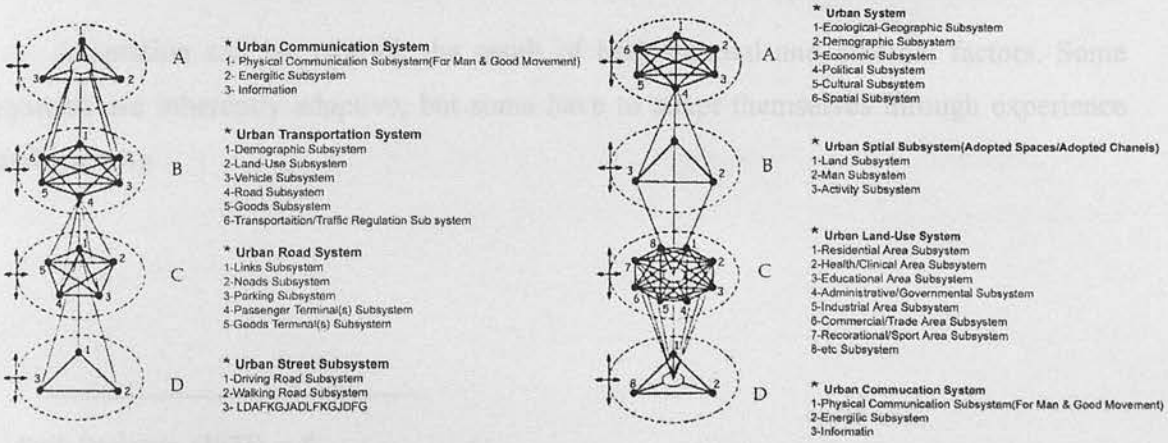


Figure 1-8 An Example of Ranking in Urban System and Ranking in Urban Communication System
Source: Shahidi, M. H. (1991), p.35

1.1.3.1.12 Size of System

A system size usually has nothing to do with its physical dimensions but is determined by the complexity of the system and is expressed as 'variety'. The variety of a system, then, is the number of distinguishable elements within it and depends "on what set the elements are thought to be part of."[12]

1.1.3.1.13 Variety or Complexity

Variety is a measure of complexity and the number of states a system can acquire. Clearly, it rises with the increasing number of elements and attributes. It varies from level to level, i.e. in the initial stage it is determined by the number of elements or subsystems, at the next stage by the number of possible relations and then by the number of reciprocal relations and finally by the number of states the system can acquire.[13]

1.1.3.1.14 System Characteristics

The characteristics of systems are of interest when we deal with adaptive systems, which are those systems, natural or human-constructed, that "possess the ability to react to the environment in a way that is favourable, in some sense, to the continued operation of the system". This is achieved through use and application of feedback.[14]

Adaptation can be, overall, the result of both internal and external factors. Some systems are inherently adaptive, but some have to adapt themselves through experience and learning.

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[12] Reif, Benjamin, (1973), p. 9

[13] Reif, Benjamin, (1973), p. 19

[14] Reif, Benjamin, (1973), pp. 13-14

The major characteristics of systems are goal, stability, complexity, differentiation, economy, feedback development, transmission of information ... and most importantly order and self-regulation, which we shall now deal with.[15]

1.1.3.1.15 Order

Order is the most outstanding feature of flexible systems. M. Goldsmith suggests, "Order can be defined as the influence of the whole on the parts. Order has also been defined as limitation of choices. For the greater the influence of the whole over the parts the greater must be the constraints imposed on them to make sure that they behave in a way that will further the interests of the whole".[16]

As order in a system raises the ability of the system to withstand changes in the environment, systems are constantly trying to raise the level and number of constraints and pressures. Thus, in such systems choices are constantly on the decline.

1.1.3.1.16 Self-Regulation

According to cybernetics, a system that attempts to adapt itself to the upheavals that arise in the environment requires a control mechanism that, with the help of information feedback, reciprocally brings about appropriate changes and developments in the system itself. Such a system is known as a self-regulating system, one that is regulated from within. Self-regulation will only take place if the system continuously and over sufficiently long periods receives feedback, and if changes in the environment remain within a reasonable range. Then a subsystem develops and acts in a way as to ensure the stability of the whole system.

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[15] Reif, Benjamin, (1973), pp. 17-21

[16] Reif, Benjamin, (1973), p. 18

1.1.3.2 Entropy and Neg-entropy in the General Behaviour of Systems

According to classical physics and its unidirectional causality, all systems "age", i.e. move towards disorder and corruption and this process is irreversible. According to modern physics and its thermodynamics and to the systems theory, however, most systems being open and involved in the constant transformation of energy into mass and vice versa, the process is bi-directional. That is to say that while systems tend on the one hand towards disorder and corruption, they also tend, at the same time towards generation and order, on the other hand.

Negative entropy is one of the most important distinctions between open and closed systems and is the reason why life, as a system with tendencies towards order and growth, has survived. It is not clear, however, why an open system such as a living cell can continue its trend of order and growth, despite the law of probability, which drives it towards disorder.[17]

1.1.3.2.1 Classification of Systems

Systems have been classified from different points of view (e.g. life, objectivity, relations with the environment etc). Here we shall discuss the two most important of these:

1.1.3.2.2 Baulding's Classification, According to Hierarchy of Universe

Baulding classifies systems from this point of view into nine (9) categories. According to him, the laws that govern the lower levels of this classification also govern the higher levels. However, as one moves from one level to the next higher level, more laws come into play and govern this higher level.

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[17] Chadwick, George, (1971), pp. 49-60

Reif, Benjamin, (1973), pp. 69-70

1.1.3.2.3 Multi-Facet Classification

Beer and Reif developed this classification, which is based on the consideration of a number of aspects. To begin with, Reif divided all systems into two categories: natural and human-constructed. The human being has no hand in the creation of the first category whose systems are completely natural. The second type of system is human-constructed although there may be natural elements within it, e.g. a city is human-constructed but contains humans and animals that are natural systems.[18]

Beer maintains that these systems may be classed from another angle as well: deterministic systems and probabilistic systems. The first type is predetermined and can be classed as simple and complex deterministic systems. The second, also classed into simple and complex, are probabilistic systems, and are subject to probabilities. The two classifications, that of Beer and that of Reif can be combined and presented as given in Table 1-1.

Table 1-1 Multi-Dimensional Classification of System (By Reif and Beer)
Source: Shahidi, M.H. (1991), p.60

Reif Classification	Beer Classification	Combine Classification	Type	Example
Natural System	Deterministic	Simple	1	Atoms, Crystals, Water Molecules etc.
		Complex	2	Human Nervous System
	Probabilistic	Simple	3	Course of An Electron Movement
		Complex	4	Orbit Of Galaxies
Man-Made System	Deterministic	Simple	5	Thermometre, Scales, Windy Dolls
		Complex	6	Aeroplane, Computer, Satellite
	Probabilistic	Simple	7	Coin Rotation in the Air, The Motion of Billiard Ball
		Complex	8	City, Location of Urban and Regional Activities

[18] Shahidi, M.H. (1991), p. 59

Considering the above classification one can conclude that cities and regions are to be identified as the eight level system, which in itself has the specifications of all systems, and is known to all architects, planners and urban designers as a 'complex probabilistic human-constructed system'.

1.2 A Systemic View of the City

1.2.1 The City and Region as Spatial Systems

At first glance, a city may appear to be simply a collection of buildings linked by highways, roads and passages. In fact, this 'whole' may also be situated in an area with an accumulation of buildings and population. In addition to this, a region might be defined as areas of cultivated and uncultivated terrain, functional or wastelands that are linked through a network of roads and routes.[19]

Providing we accept this approach, we would assume urban buildings and functional lands in regions as isolated physical phenomena, which are independent, and if we want to make alterations in them, we would have to treat them individually and separately. However, the truth is that these are all the physical aspects of 'urban life' or 'regional life' and they cannot be regarded as the totality of a city or a region. Besides, every part and every element of a city or region has interdependency to other parts and elements. As elements of a system; they cannot be considered and treated separately from the other elements, or from the whole system. Finally, the laws that govern systems apply to cities and regions as well. Indeed as we saw previously, cities and regions should be considered as complex probabilistic human-constructed systems (the eight levels in the Beer and Reif categorisation). In other words, urbanisation is the most complex system to be encountered.

[19] Shahidi, M.H. (1991), p. 62

The definition 'life of a city' and 'urban life', and the characteristics of urban and regional systems, their related elements and relations, as the major basis of a physical system will be dealt with successively.

1.2.1.1 Social Activities in Response to Social Needs

Before dealing with the major organs of the city, we must first consider the activities or behaviours within the city.

To meet its increasing needs, the human society must perform certain actions, which we call social activities (consisting of behaviours and praxes). Indeed, the city and region are the physical vessels in which massive social activities take place. However, each activity is made up of a number of sub-activities each of which meets a certain sub-need. That is to say that the city or region is made up of hierarchies of activities that are intended to meet hierarchies of needs, or more technically speaking, to achieve goals. For example, those activities that result in the production and distribution of goods are classed as economic activities. Naturally, each of these can be subdivided into a number of sub-activities. For example, distribution and production are the two major sub-activities of the economic sector.

1.2.1.1.1 Social Activities as Activity Systems

An 'activity' being carried out to fulfil a 'need' or to perform a 'task', consists of a number of sub-activities, the relations of which define the 'nature' of that activity. Hence, an activity is in fact an activity system.

In the case of a city or a region, the urban and regional systems reflect the 'activity system'. In this approach, the 'urban activity system' consists of 'economic activity subsystem', 'political activity subsystem' and other subsystems. In other words, an 'urban activity system' is a set of public domain subsystems, which have an effect on each other in turn. This is well illustrated in Figure 1.9.

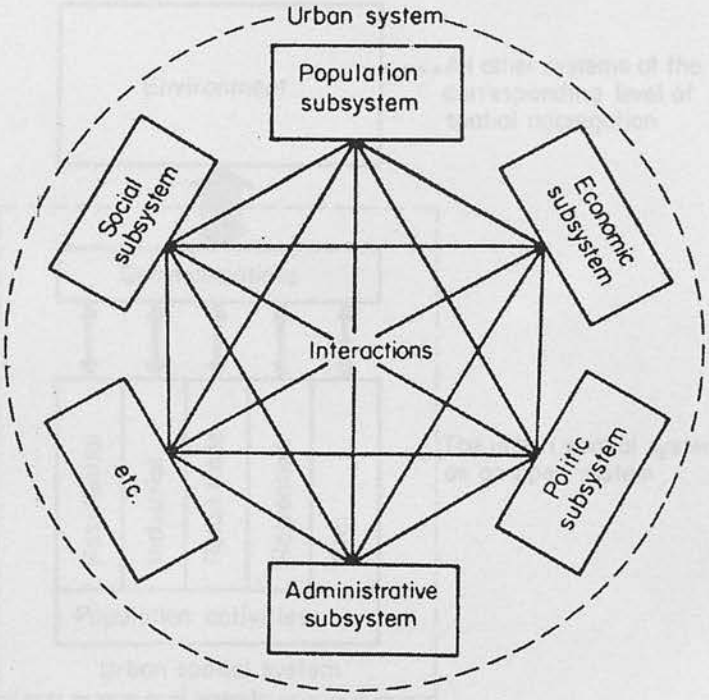

Figure 1-9 Urban System Can Be Considered Structured by Several Subsystems
Source: Reif, B. (1973), p.31

It should be taken into consideration that an 'urban activity system' (and regional activity system), each of these activity subsystems are interrelated and can be considered as a system with its subsystems and the relations that link them together and govern them. These are all open systems that constantly interact with each other and with their environment. These relations and interdependencies are shown in Figure 1-2.

It should be noted that the interaction between these subsystems of the 'urban activity system' and its environment is carried out through different communicative networks (communications). The public domain is the scene of communicative networks for exchanging information and energies between urban activity subsystems. This is quite apparent at all the analytical levels of a system, which is shown in Figure 1-10.

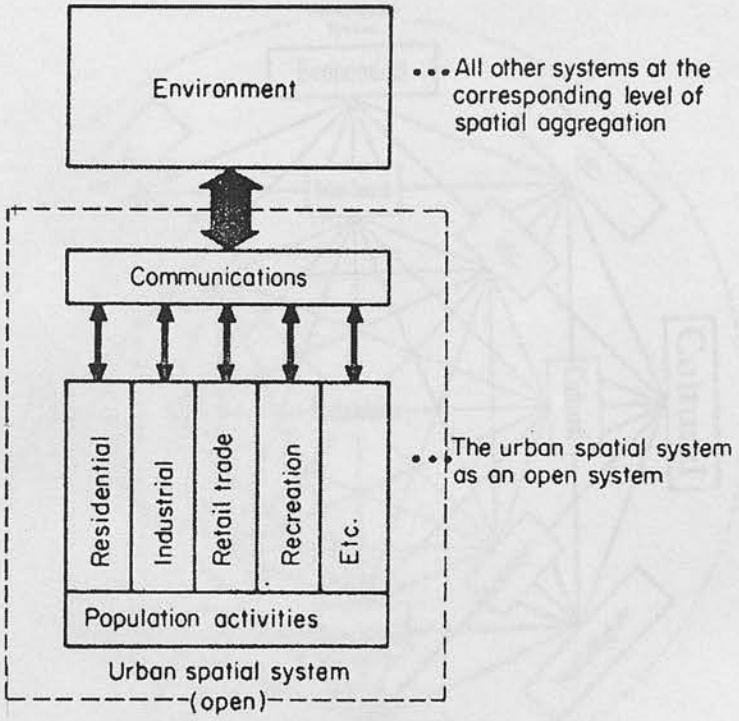

Figure 1-10 The Urban Spatial System as an Open System
Source: Reif, B. (1973), p.31

1.2.1.2 Activity and Spatial Systems

Each activity requires a place or space in which to take place. Therefore, one could say that activities make up the soul of a city or region and the city or region the physical body in which the soul is. Thus, the spatial system of the city or region must be made up of spatial sub-systems such as the economic spatial sub-system, political spatial sub-system etc. Here again these sub-systems being open, they interact with one another and with their environment (Figure 1-11).

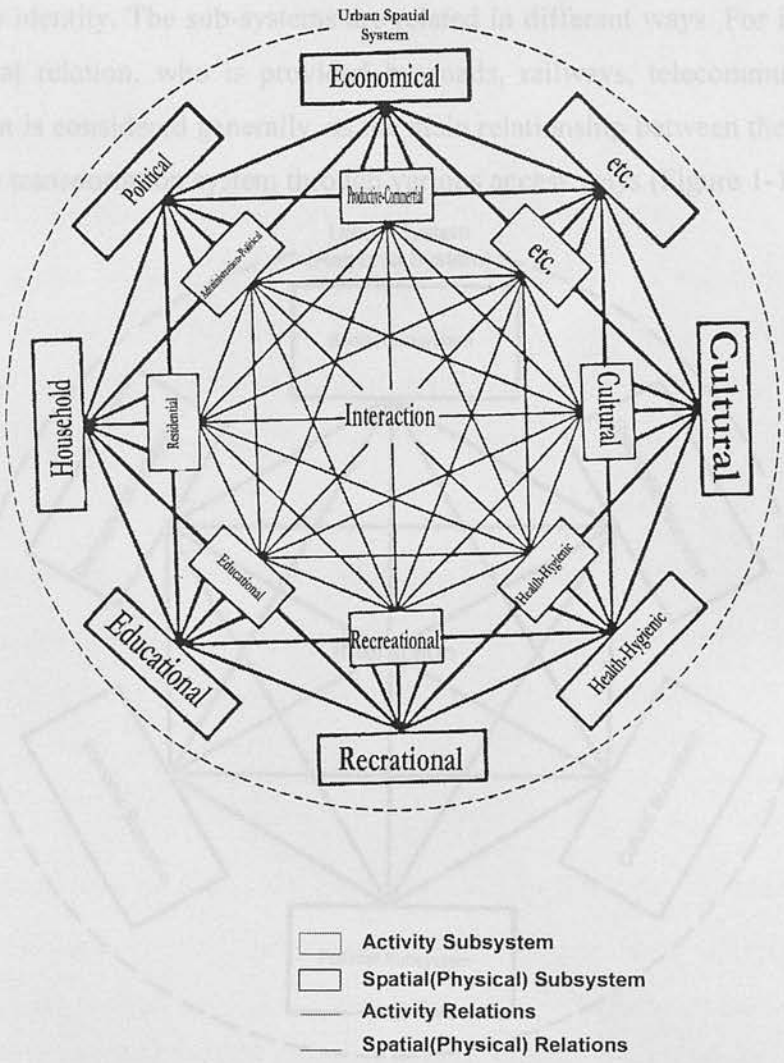

Figure 1-11 Urban Spatial System and Its Activity and Their Interactions
Source: Shahidi, M .H. (1991), p.68

1.2.2 Urban and Regional Systems

From the foregoing arguments, one can conclude that a city or regional system is made up of a number of sub-systems that have reciprocal interactions with the goal or objective of a better social life for human beings.

The city or regional system can also be considered as being made up of such sub-systems as geographic, population, social, economic, political, cultural etc., which give

the system its identity. The sub-systems are related in different ways. For instance, there is the physical relation, who is provided by roads, railways, telecommunications etc. however, what is considered generally, as the main relationship between the physical sub-systems is the transportation system through various access ways (Figure 1-12).[20]

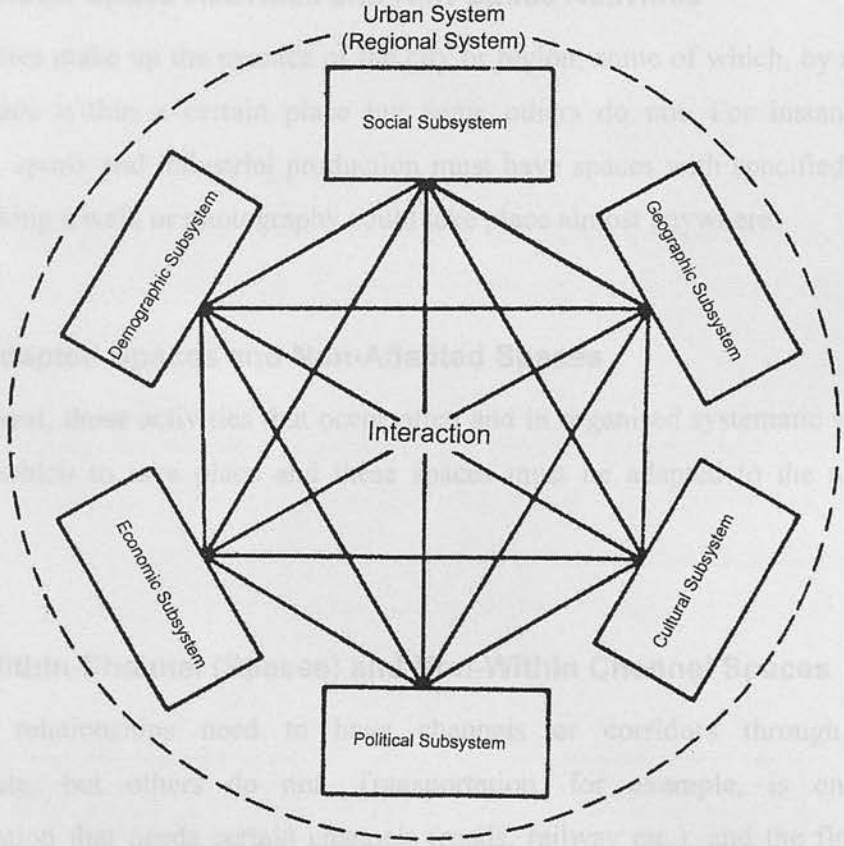

Figure 1-12 Urban System (or Regional System) and Their Subsystems
Source: Shahidi, M. H. (1991), p.71

1.2.3 Urban and Regional Spatial Systems

As pointed out earlier, the elements within a city or region can be considered as subsystems with networks of relationships that bind them together. These elements and relationships operate in order to fulfil certain requirements with the aim of meeting people's needs. We shall now deal with 'activities', 'spaces', 'relations' and 'corridors'

[20] Shahidi, M.H. (1991), p. 65

through which the tasks are performed and which are the major organs of the system as a whole.

1.2.3.1 Within-Space Activities and Non-Space Activities

Activities make up the essence of the city or region, some of which, by nature, need to take place within a certain place but some others do not. For instance, surgical operations, sports and industrial production must have spaces with specified conditions, whereas taking a walk or photography could take place almost anywhere.

1.2.3.2 Adapted Spaces and Non-Adapted Spaces

In general, those activities that occur often and in organised systematic ways require spaces in which to take place and these spaces must be adapted to the needs of the activity.

1.2.3.3 Within Channel (Spaces) and Non-Within Channel Spaces

Some relationships need to have channels or corridors through which to communicate, but others do not. Transportation, for example, is one form of communication that needs certain channels (roads, railway etc.), and the flow of water and distribution of gas are likewise. However, the relationships between soil, water and air, which are the major elements of the ecosystem, do not, nor do increase in house rentals, prices or municipality charges. The same applies to the relationships between social and political insecurity and prices of properties. The first type of relationship is known as "within channel relationship" and the second "non-within channel".

1.2.3.4 Adapted Channels and Non-adapted Channels

The channels or spaces through which within-channel relationships take place are known as 'adapted channels' and those through which non-channel relations go on are called 'non-adapted channels'.[21]

1.2.4 Elements and Relationships within Physical Systems

Based on the foregoing, we can clearly define physical systems, i.e. cities and regions as "a physical system that is a collection of adapted spaces (elements/subsystems) which have emerged to meet certain organised needs (goals) and among which there are reciprocal within-channel relationships".

This definition means that the elements of a physical system (land-uses) are adapted spaces among which there are reciprocal relationships (transportation). Figure 1-13 illustrates the concepts of adapted spaces and within-channel spaces as the elements and relationships that make up a city or region. Figure 1-14 illustrates a physical system with its elements and the network of channels.

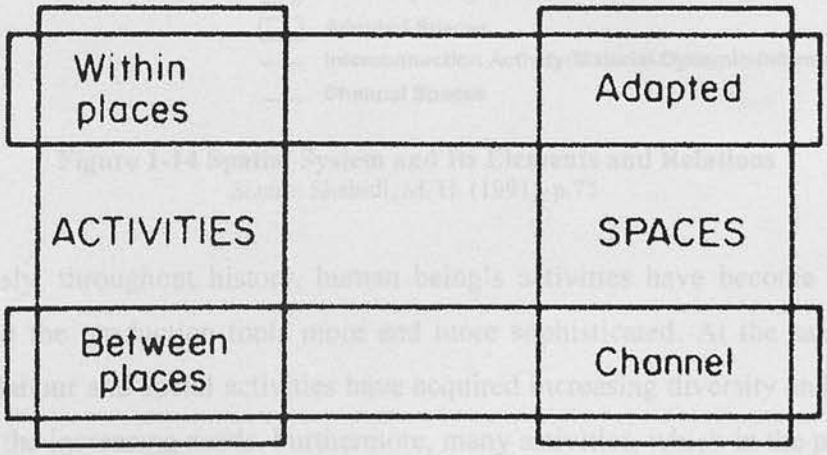

Figure 1-13 Correspondence between Activity and Space Types
Source: Reif, B. (1973), p.33

[21] Shahidi, M.H. (1991), p. 74

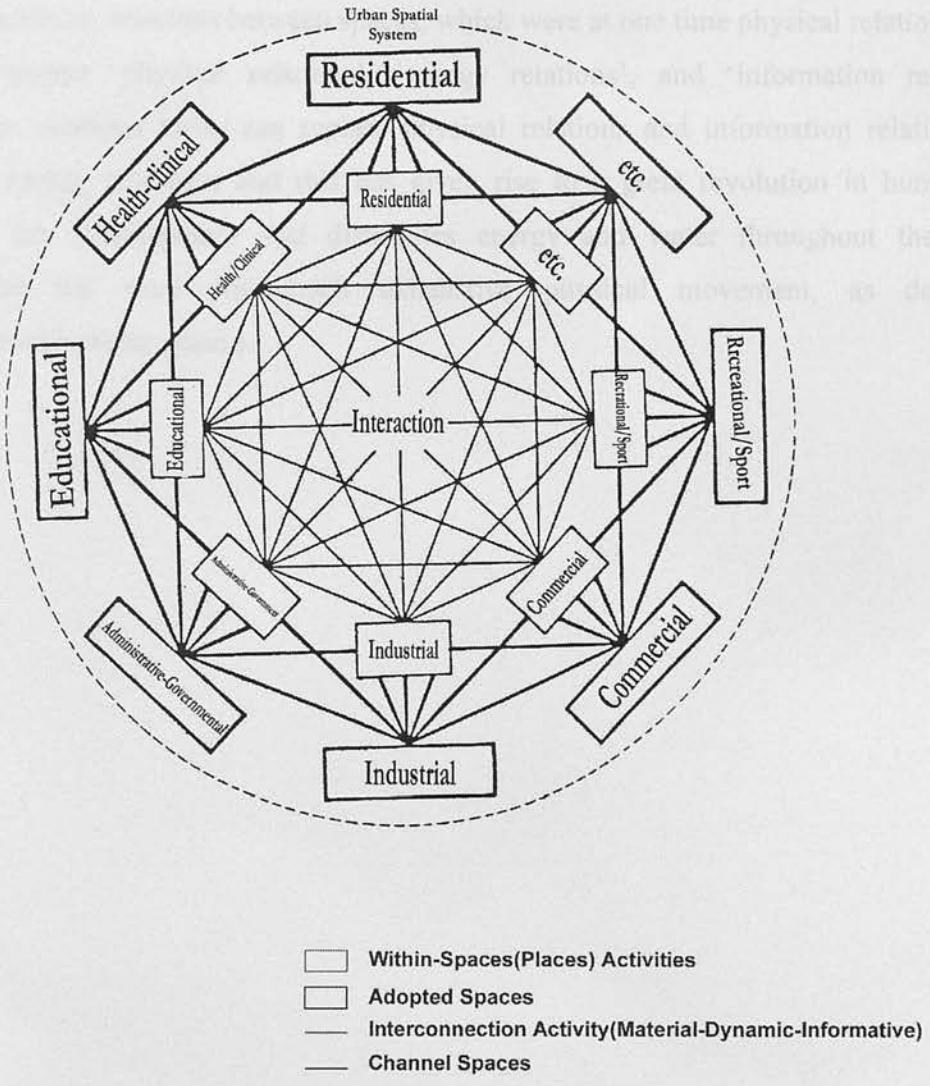

Figure 1-14 Spatial System and Its Elements and Relations
Source: Shahidi, M. H. (1991), p.75

Obviously, throughout history, human being's activities have become increasingly complex and the production tools more and more sophisticated. At the same time, the division of labour and social activities have acquired increasing diversity and complexity in line with the increasing needs. Furthermore, many activities, which in the past were not within space activities and took place in non-adapted spaces, have now become within-space activities (e.g. baking bread, making butter and cheese, sewing, etc.). Surgery that used to take place at the invalid's home now must be performed in hospitals.

In addition, relations between spaces, which were at one time physical relations, have today become 'physical relations', 'energy relations', and 'information relations'. Energetic relations today can replace physical relations and information relations can replace energy relations, and this has given rise to a great revolution in human life. Today, the infrastructure that distributes energy and water throughout the cities, eradicates the need for much exhaustive physical movement, as does the telecommunications system.

2

CHAPTER TWO

INVOLVEMENT IN THE CITY

CHAPTER TWO
2. INVOLVEMENT IN THE CITY

2.1 Background and History

2.1.1 Preface

Involvement in the city is a subject with a background as old as cities themselves; its definition, which is defined as becoming involved in urban affairs in a city location or in its limits also has a long history. However, organised behaviour, scientific views, professional and classified involvement in the city and the manner of involvement in it as a specific issue has only been seen from the beginning of the twentieth century and whatever existed previously, has been presented under the generic title of architecture and architectural art. In this regard, we take advantage of William Morris statement in 1881:

"Architecture includes the whole physical environment which surrounds human life and till we are a member of civilised society, we cannot exit from its surrounding; because Architecture consists of positive alternations and transformations which have been created proportional to man needs on the earth surface and in this way only deserts are exceptional..."[1]

In this section, the study intends to review "involvement in the city" during recent history (contemporary) and from different views, which have been the focus points in the history of involvement in the city. Therefore, the emphasis is on the outstanding and important points from the modern periods, programming transformation and the super-modern, and what their considerable effects have been on the involvement in the city's

[1] Jodat, M. R. (1995), pp.1-2 – Mohammad Reza Jodat: (1939 -), Architect, member of the Faculty of Architecture, Shahid Beheshti University (1975 -), Editor "Architect and Urban Design" Magazine (1995–2000), Editor in Chief "Iran Architecture Magazine"

development and its transformation. In addition the factors, which result in such an involvement, are studied.

2.1.2 Modern Period and Modernism

Modernism itself is a phenomenon born of the Industrial Revolution. When Descartes said: "I think, ergo I exist" he states thought as the existence base, origin and criterion for the truth (fact), gradually wisdom takes the place of authority, religion and tradition and such a vision penetrates to all the human life areas.

The study selected the modern movement, which in contemporary language and culture has obtained a relatively specific meaning. William Morris offers a convincing definition:

"The art for which we are working is a capital, which all the people can have share in it and is used for their life improvement; and in fact if all the people do not participate in it, nobody will have any share in it."[2]

This statement reveals the deep relation between modern architecture and industrial civilisation. As industry provided production facilities for goods for general public consumption, so Modern Architecture provided equal and proper cultural situations for all mankind. It was borne of the technical, social and cultural changes related to the Industrial Revolution, about the year 1760. Modern architecture was a tool for integrating thought to action. This issue, for the first time, was put into execution through the works of William Morris in England from 1862 when Morris, Marshall, and the Partners Company rose to dominate commercial works. After the goal become clear, it was necessary to make sure that the selected method was general enough; to unite individual attempts and obtain executable results in other fields, establishing a bridge between

[2] Jodat, M. R. (1995), pp.1-2

theory and action. In terms of Modern Architecture, this is a step which was taken during the First World War; its precise date was 1919, when Gropius opened the Bauhaus School in Weimar. From that time, it is possible to talk specifically about the Modern Movement.

After the First World War, it was imagined that through denying any connection with the past, it was possible to create a new system of forms with international value, but the happenings' path proved that such a creation was not possible. Contemporary culture, under the influence of such a failure has started to analysing its theories; and reassess its history.

It seems there was a basic and sequential direction of thought and action in Modernism and the Modern Architecture Movement, first with Owen and the Utopianists in the middle of the nineteenth century, then with Ruskin, Morris, and the experiments of European leaders between 1890 and 1914. Then it reaches to the American house constructors and Frank. Lloyd. Wright. Finally, after the First World War, because of Gropius' qualification and attempts, it found its place as a single movement. From 1919, Gropius opened up a path to continue this transformation in world history.[3]

The experiments, which were done before 1919, by Morris, Victor Horta, Wagner, Hoffman, Hendrik Petrus Berlage, Perret, Sullivan and Wright are interesting and important, because they established the Modern Movement. Nevertheless, these experiments belong to another historical era, which resolved problems in a different way from today. The models which are good patterns for us are those of Gropius, Oud, Mies Vander Rohe and Aolto Jacobson who undertook experiments that have affected our life and originated today's life methods.

[3] Jodat, M. R. (1995), pp.4-6

2.1.3 Emergence of Urbanisation

First, the word 'urbanisation' should be defined, because it is full of ambiguity. In current usage it refers to road and structural operations and is an indicator of the maps and pictures of the cities, each one of which is an indicator of a particular period. G. Bardet attributes first use of the word 'urbanisation' to the1910s[4]. Larousse Dictionary interprets it as 'human settlement science and theory'. The emergence of a new word is connected with the emergence of a new reality. At the end of the nineteenth century, the world's industrial societies viewed life as a specific order, one which differentiated itself from past urban arts by its reflective and critical nature and its scientific tendencies.

Modern urbanisation's roots can be found in the work of Owen, Fourrier, Richardson, Cabet, and Proudhon. Their theories are similar to each other; they refer to the city, originate from their common concept about humanity, in a way that they interpret 'human individuals', separate from their society, location and time situations; that they are definable in a scientific form, and that problems resulting from human relationships with others and with the world can be solved by wisdom, science and techniques. By the way, they see this 'complete human' as having captured within him something of the alienation created by the industrial cities of nineteenth century.

It was thought that urbanisation, with its roots in the above group of thinkers, could resolve the problem of 'human architecture'; a solution can be executed any time and in any place. That is why Victor Conciderant says with no doubt that: [5]

"A human with his needs, tastes, and tendencies is dependent on determining conditions for a complex of building systems which are more adaptable to his nature."

[4] Choay, Francoise (1997), p.2

[5] Choay, Francoise (1997), p.12

The ideal city from these theorists' point of view is a city that follows new, simple and natural instructions and they consider that all the past legacies have failed. They offer a vision that is why aesthetics and the concept of order gain such importance for in aesthetics; logic (originating from wisdom) and beauty are in co-ordination with each other. In their view, the city also can appear as a pattern and for this pattern comprehensive principles exist.

Urban space (according to an analysis of human functions) can be divided into many classifications: housing, work, education and leisure[6]. Fourrier even argued that the locations of different forms of industry, and agriculture should be allocated separately. 'Standard' housing is also extremely important, as. Proudhon suggests: 'Discovering housing patterns is our responsibility' and Fourrier offers his 'work and live complexes' of public housing patterns, sample workshops, and rural buildings. Owen advises a type of 'school' and Richardson suggests the pattern of a 'hospital' or the pattern of a 'public laundry'[7].

'Standard housing' has a specific importance and priority in the opinion of 'progressive followers' Victor Conciderant said: "The role of the architecture is not to revolve the shelters of labours, houses of the bourgeoisie and castle of the merchants' and Marcie's. 'This is the Castle which the human beings should live on there'." And Proudhon is indicating "The most first issues which needs a care is the housing."

However, behind all these caring statements and democratic notions, political power and absolute value conceal the need to achieve maximum outputs by taking advantage of mechanical tools and human resources.

[6] Choay, Francoise (1997), p.13

[7] Choay, Francoise (1997), p.14

2.1.4 The Appearance of Modernism in Urbanisation

The first appearance of the aforementioned patterns is found in the *Industrial City* by Tony Garner[8]. His work made a great impression on the first generation of rationalist architects. Le Corbusier wrote:

"In this work we can find an attempt to set and time coordination of useful and imaginary solutions. A unit order is distributed in all the city areas and the selection is done like original volumes, the spaces are fixed according to practical order and form of the order resulted from a poetically sense of an architecture."[9]

After the First World War, technical progress and leading research by architects offered a way forward to progressive followers (modern) for patterns of urbanisation. The interesting point is that despite the very different political-economical conditions, at approximately the same time J.P. Out, J. Rietveld, S. Von Estern in the Netherlands and Bauhaus, Gropius in Germany, the Constructivists in Russia and A. Ozenfont and Le Corbusier in France all presented similar pictures of the 'Future City'.[10]

All of them state a new relation with the city and all of them believe in a simple and logical concept of beauty and a search for universal forms. Principally, in all of these views, science and industry are emphasised as a cross-cutting interface with the past Gropius established the first modern architecture school in 1919. The Bauhaus School was testimony to his goal of compounding the arts and industry and providing the criteria and regulations for applicable arts such as architecture

[8] Choay, Francoise (1997), p.28

[9] Choay, Francoise (1997), p.28

[10] Choay, Francoise (1997), p.29

2.1.5 The Athens Charter

In 1928, the first CIAM Meeting was held. Initially, the aim of this group was concentrated on housing form. But at the Congress of 1930, this group worked on urbanisation and then in 1933, the Fourth International Congress of Modern Architecture under the title 'Applicable City' was held and one of the most innovative and discussed documents of Modern Architecture, 'the Athens Charter' was published. The principles of this charter were collected in two books and offered to people later:

1. *The Athens Charter, CIAM Urbanisation* by Le Corbusier, which was published in 1943.
2. *How our city can survive?* By Juse Luis Sert (1902), Vice-President of this congress in the year 1944, published by Harvard University Press.

This charter did not invent anything, but it did determine a series of effective methods for the city, some going back to the eighteenth century. The charter gave such methods dominance, expanded some of them and re-emphasised their general aspect. It suggested a pattern, one which in its authority and self-arbitrary system should be considered in its full meaning in the light of the history of the formation of the industrial city, and we cannot understand its real objectives unless we consider the charter in its base formation in connection with the Modern Movement's theories about the city, and most importantly, with Le Corbusier's viewpoints. The meaning and real implication of all his previous quotations become apparent, in this charter.[11]

After the Second World War, most European states encountered the problem of repair and reconstruction a clear example was France; its concentrated governmental structure allowed it to follow through on definite priorities to execute house-construction policies. The first priority was the construction of a considerable number of residential units to solve the serious housing shortage, which had its roots in the economical

[11] Mohammadzadeh, T.H. (2000), pp.11-12

stagnation of 1929. This shortage became more acute after the war, exacerbated by rural migration to big urban centres, and the transformation of agriculture and industry up to the late 1960s, when the acuteness of the problem again became apparent.

The second priority of the government was related to the expansion of the building industry, in that the problem of increasing house production was solved by cheaper prices.

The third priority was urban programming which was the only way to produce new houses en masse and led to an improvement in quality and quantity. These priorities were not only limited to France, but the France solutions were different from other European countries' approaches.

In the reconstruction period in France, there were three successive patterns: firstly, the regional pattern which was suggested for some of the historical city centres; second, the logical pattern, which Aguste Perret had suggested, in co-ordination with modern traditions, but preserving the dominant specifications of the city; third, Le Corbusier's radial city pattern, which after considerable observations, finally stood as the single official pattern for all France's house construction plans up to the end of 1970.

The city pattern, according to the Athens Charter and in a way that Le Corbusier had shown for the first time, appeared as a new space that clearly adopted an opposite point of view from the historical city's space[12]: As a first step, the space was converted to a complete abstract thing and confined to its three dimensions. This space is monotonous, single-processed, without unity, without directions, and without any cultural, symbolic and/or historical value and is not the subject of any political or economical strategy. It is a space that is reduced to the absolute quantity and a 'proper' space for both industrial

[12] Mohammadzadeh, T.H. (2000), p.13

repetition of the same components separated from each other and for separate interruption and application analysis, which is formed exactly with area allocating technique.

Such a new image of space, which was stated clearly throughout the Athens Charter, is the first condition for the appearance of the aforementioned pattern, but does not allocate its application. The applicable city in this charter has been described as a system helped by a series of relatively old examples and scales, like biological, mechanical and finally industrial scales (or mechanical). So that the mechanistic city is a living organism, one that consists of primary elements which are assembled in the same way as an assembly-line process in automobile production.[13]

Le Corbusier through word exchange ('apartment residing' instead of residing, 'walking space' for street, 'green space' for park or garden) in fact attached to the things, which were stated through the words; in a way that the city itself converts to an empty skin. In Table 2-1 below, the problems and difficulties that existed at the time of charter plan are stated together with the charter designers' views of the city problem and the basic backgrounds of the designers.[14] Modern architecture and urbanisation through the principles that were stated in the Athens Charter in practice could not offer a strict connection with the city, its history, people and its consumers and it was necessary for new thinking to reach the next stage after modernism and look for other styles.

Table 2-1 The Modern Movement: key dates and events
Source: Bahraini, S.H. (1999), pp. 17-18

Key events	Year
Chandigar City Plan	1947
Taking advantage of Islamic architectural style in the plan of Baghdad University by Gropius	1950
Planning of the new city of Brasilia by Le Corbusier followers	1957
Planning of the new city of Guyana in Venezuela by the common office of Harvard University and M.I.T	1959
Presentation of the Urban Metabolism Theory by Fuminko Maki	1960

[13] Mohammadzadeh, T.H. (2000), pp.14-16

[14] Bahraini, S.H. (1999), p. 20

In the view of all modern urban designers, the city appears as a producible work tool and in order to work well, the components of this tool should be classified, analysed and its every function should have its own place (the same as a machine). The same thing that Kevin Lynch described in his book *Good city form*, when stating the three mason's rules for cities, as a "machine-made model".[15]

"Machine-made thought still is alive, in impetuously theories of Archigram, Solary, and Friedmann; although each one takes advantage of special forms. Such a view also can be seen in powerful concepts of systems' analysis, which define the world as a complex of components related to each other with good relationships, going forward to seek more like a huge plain. In a gentler frame, the machine-made model is often our present interactions with the cities, our function manner in land separating, traffic engineering, installations, structural and healthy codes, and region allocating. The mentioned impetuses are as follows: justice in allocation, good access, wide selection, correct technical function, production efficiency, material welfare, physical health, and components independency (which means personal freedom and freedom in space utilisation and act in it). These impetuses, which are discussable, are not without any importance or invalid and they can easily conform to machine concept. In addition, the machine with its components and separable parts can be analysed and improve its parts one by one through huge saving in its effort.

Explicit wisdom, with all its splendour and danger, in its best form is used here. Of course, this question should be stated that whether cities are some thing more than it is, and whether are more mislead than to imagine a city as a machine. A tool made of hard parts to transfer force and motion (and today we should add the information) so that it can fulfil it work."

[15] Lynch, Kevin (1997), pp.109-111

Table 2-2 The Athens Charter Specifications
Source: Mohammadzadeh, T.H. (2000), pp.22-23

Urban problems and the difficulties that existed at the time of designing the Athens Charter	1- House problem priority, bad house and lack of house in the conditions after the World War 2- Lack of urban green lungs and the spaces for passing leisure time 3- Intensive density of traffic and much time wasting 4- Intensive air and sound pollution 5- Intensive health poverty in industrial city areas 6- Interference of industrial and residential applications 7- Interference of divers and walkers travel 8- Class distance of urban areas
View manner towards the city problem in the Athens Charter	1- The Athens Charter has an expanding and comprehensive look to the city and in fact, it considers the connection of a residual unit to total region with the city. 2- It has an inflexible and machinist look towards the city. It looks at the city as a tool and machine that each part of it should be placed in a specific location. It is from such an angle that thinks about separating four main functions of the city. 3- It considers its solutions expandable in all cities and all the societies and pays no attention to the subjective differences of the cities.
Basic theories of the Athens Charter designers	1- Mechanism 2- High building, the most proper form to respond house applications 3- Governments and rules are the basic force for urbanisation. 4- There are four main functions in urbanisation, which should be separated. 5- Historical interruption and a look to the front 6- Standardising city environment and buildings, international style and the similarity of urban spaces 7- Urbanisation is the architects' responsibility and only the specialists are qualified to take part in urbanisation operations.

2.1.6 Transformation in Urban Planning and Designing

In the 1960s, the cities of European industrial countries under the effect of the structural specifications of capitalism's expanding pattern were far from the ordinary cities' pattern of the Athens Charter theorists. The problems related to: illogical distribution of activity and service centres in the city; irregular expansion of urban suburbs with the least facilities and services; translocation of huge population among residential centres; activities and services which combined with capital waste and living environmental pollution and increasing city residential costs, had appeared more or less everywhere. These problems together with emergent needs and realities had shown that solving difficulties related to urban organisational issues, like the guild rights, had to be placed in the socio-political framework of these countries (such as England).

People were eager to have the right to take advantage of house and urban services and a type of urban organisation that would avoid wasting resources, create a healthy environment and also consider human spiritual needs. Confronted with these conditions there were two official, recognised tendencies that responded to the urbanisation of this era.

The first group (from the utopians to the urban designers of the modern movement[16]) looked at the city in the context of single and ideal patterns which usually were formed in the minds of architects and city constructionists with no attention given to real facts such as physical, economical and legitimately existing structures. The second group, was based on giving a standard look to the urban development, and mainly was dependent on the prediction of future development paths. This approach, which attracted governments'' attention, paid no attention to the existing facts and since more emphasis was put on quantitative standards and minimum requirements, it was unable to offer a solution.

[16] Ghiyasi, N. (1994), pp.20-26

Therefore, in the 1960s and 1970s, researchers of city problems, by emphasising the following points, tried to survey the reasons for the inadequacies of traditional urban designing tools[17]:

1. The city is in fact a social product, with many factors affecting its development, and it is not a phenomenon, for which we can provide single development patterns.
2. Development goals cannot be common, single, and psychological; but they should be compiled for a definite era based on exact identification from the conditions of each city and each country.
3. The origin of problems should be recognised exactly, because removing gradually the obstacles is the only way to reach the goals.
4. Applying control methods to achieve definite aims, will assure dynamic designs.

The investigations of these researchers showed that:

I. Urban planning goals, which were both comprehensive and detailed, were determined not on existing facts and specifications but as common and abstract for all the urban limits in any place and any time. The planning process started through allocating common goals such as a balanced organising of urban functions and activities, preserving the routine manner of urban equipment and facilities, and city development and construction without allocating the specific goal of studies in different fields and recognising definite obstacles and facilities plus its reflection in executive policies.

II. The classic stages of the designing procedure were summarised in three words: surveying, analysing and designing (SAD). First, the designer through surveying the existing situation collects all the necessary information related to

[17] Bahraini, S.H. (1999).

a city or town. Then, in order to identify phenomena and recognise future development tendencies, the designer analyses the collected information. Finally, once the data and results are obtained, the designer offers his design based on correct criteria. Such a procedure would be repeated after several years to update the design. Behind the logical appearance of this method was a statistical view of urban development and transformations. It was assumed that in order to find optimum solutions for urban development, the existing procedures should be recognised and analysed.

III. Traditional plans were a complex of rules and regulations related to a method of taking advantage of land and population and building densities, which were offered as comprehensive and detailed plans. Urban comprehensive plans included general regulations and rules and detailed plans were responsible for scrutinising regulations. In fact, this issue crossed the border between means and goals and so the indices such as density, family, and access, which at the analysis and design stage were considered as criteria for measuring existing situations and determining quantitative goals of the plan, were replaced in the designs' content. Therefore, in urbanisation scale, the city divisions were important, while in building construction scale, the construction density (cubic metre) on the land (square metre) was emphasised.

IV. The most important function of urbanisation was the rule of making city facilities and equipment routine in different parts of the city. Therefore, programming and supervision on construction quality and space transformations were not counted as the executive institutes and organisations' responsibility and as a result, the determining city features were transferred to private constructors. As the tangible reality shows, the quality of every urban space to a high degree depends on the quality of construction and its manner of space transformation. Therefore, specific actions and interjections in the manner of construction can be considered as the final stage of designing. The mechanical separation of urban and the organisation of structural affairs from each other have shown that organising urban activities should be paid great

attention at the designing scale. Such a separation creates a chasm between urbanisation and the real procedure of construction and provides the facilities for the separation of city and architecture in an irreparable manner.

V. For lack of specified goals, controlling goals and political realisation, at the first step of the design's appearance or during its implementation, it was not possible for institutes' representatives and the people to have a say in the process. Therefore, despite the claim of assuming all citizens are equal in the designing decisions, the designs in practice had been converted to a tool for hiding the real procedures of city development.

Regarding the above deficiencies, in this period, urban designs could not practically take an active role in the supervision of cities' construction and development procedures. For this reason, their transformation, as an unavoidable necessity, was considered.

2.1.7 New Methods and Tools

Near the end of the 1960s, urban planners in England through emphasising "General Systems Theory" stated the necessity of applying a systematic method to urban design and planning. This method was based on two main theories related to space programming goals[18]:

- Spatial planning, like other fields of planning have the responsibility for controlling development and transformation procedure in a specified time of to achieve its goals.
- Spatial planning, because of its wide scope and consideration of different conflicting benefits of societal groups, is intended to be a more political approach than a technical issue.

In 1965, a committee as "Planning councillor group" became responsible for compiling new rules in urbanisation.

[18] Bahraini, S.H. (1999).

These rules were approved in 1968. Urban design, in addition to controlling the organisations of urban activities was responsible for supervising and organising urban construction and space transformation. The committee in charge of compiling the new rules explained the reasons for such a transformation as follows: '...the role of urban programming does not limit to determine land application manner and specify the type of structural development in urban land.' Determining the form and quality of such development, both in the lands of existing areas that require renovation or reconstruction and in future land developments is very important and it is considered as the responsibility of space programming. Any urban planning system will be judged on paying attention to the quality of the results obtained.

The most important result of this transformation was the presentation of "structural plans' for cities and other provinces' towns and 'action plans' for urban districts. The responsibility of structural plans is as follows: composing national and regional polices, determining public policies, presenting general suggestions related to supervising on development, determining the limits that need instant interference, establishing programming organisations For the 'action plans': forming co-ordination committees in relation with public institutes.

These plans of huge scale stated also the plan of development goals, reflected the goals and priorities of local organisations and opposed traditional comprehensive plans that had the first role in planning procedures as simple and flexible plans. 'Structural plans' in addition to a very simple map in the form of city or regional skeleton consist of the reports related to the general policies of the plan.

'Structural plans' pay attention to issues such as population and activities' distribution, land application methods in the long term and public policies related to urban transportation networks, installations, and public and general services.

'Action plans', which are also called 'executive plans' are opposed to the traditional detailed plans, played a key role in planning procedures. Their waning popularity over the years, gave the structural plans a more important position in urban planning systems. The responsibility of executing public strategies of 'structural plans' has been transferred to the 'action plans' and locality plans.

Through the importance of the interjections and physical and spatial determined actions, planned urbanisation has been converted to executive urbanisation and determining space is a feature of urban transformation, which in traditional methods was transferred to the private constructors, but in this model has been placed under the direct supervision of planning system.

2.1.8 Post Modernism

In 1962, Jean Jacobs planted the first shoot of post modernism. She shows in her book *The Death and Life of Great American Cities* that urban problems are not only 'simple' problems or 'unorganised complex' problems, but in her belief, the city is an 'organised complex problem' like other bio-science fields.[19]

All key sciences of post modernism have their roots in new knowledge, such as ecology, animal behaviour study, psycholinguistics, statement concept science, neural nets disturbance theory, etc.

As Jacobs stated, 'simple sciences' like Newton's Rules and the studies on solar system are pre-samples that created modernism paradigm, while 'complex sciences' such as Noam Chomsky's thoughts about deep structures established the basis of post modernism knowledge [20].Therefore, thought patterns of post modernism form around the axis of pluralism and complexity. Post modernism, through retuning to the past, attempts

[19] Bahraini, S.H. (1999), p.121

[20] Bahraini, S.H. (1999), p.122

to explain itself. It is here that post modernism returns to the ideas of influential thinkers like Friedrich Nietzsche, which emphasise the deep disturbance of new life and its hardness and inflexibility against wise thoughts.

Some authors like Leonard Fookatef clearly attack any theory related to it existing as an exalted language, an exalted tradition, and/or an exalted theory through which one can relate and introduce everything to each other. They do not consider universe and eternity as recognisable facts if such issues exist. In fact, they define post modernism only in the form of 'doubt in exalted traditions'.

Charles Jencks declared the death of modern architecture and urbanisation at 3:23 on July 15, 1972, the time the 'Perot-Igo. Housing' residential complex located in Saint-Louis exploded.[21]

Against the concept of construction for 'human' stands the common concept of construction for 'people'. Also opposing and reacting against post modernism, we can see a further tendency towards the decorative, imitating from the Middle Ages squares, renovated sceneries as well as the 'conjunctive city' that replaced the comprehensive and regional allocating plan and 'urban rehabilitation' that replaced the defamed term 'urban renovation'.

In this approach, the culture of museum heritage therefore expands and more attention is paid to past generations' legacy. It can be said that an 'industrial legacy' appeared at the beginning of the 1970s, which was a pluralistic cycle towards the commercialisation of history and historical forms. Hewison said (1987), "post modernism and the legacy of industry are related to each other; because the goal of both of them is creating a superficial curtain that connects our life to the past." He added: "We are

[21] Turner, Tom (1997),p.17

condemned to seek the history with ourselves vulgar illustrations and imitate from a history that has remained out of access for ever."

There exists a tendency to separate the present from the past and the history. In the West, new thoughts of the end point of the industrial era and the modern period and the new conditions that were formed, began in the 1950s and were stated seriously in the 1960s. For instance, Melvin Weber offered programme discussions about the environment, fortune, incidence and non-final conditions, and then predicted the era beyond the industrial era. He believed that the lifetime of an industrial city was coming to an end; in this regard, he implied some of the symptoms of these transformations plus a few future signs.

The uncertainty claimed in science and irregularity theory, which was stated by some scientists of basic sciences in these decades, was an end point for all the 'big beliefs' in the fields of different sciences. Therefore, this point penetrated into urban sciences. In practice, modern architecture and urbanisation, through the principles stated in the Athens Charter could not create firm connections to the city, history, people and its consumers, so it was necessary for the new thinking to go beyond the modern stage and look to the other methods and styles.

Post-modernism, as Charles Jencks said, is a stage of growth. It wants to compound modern techniques to the other factors that paid no attention to modern urbanisation, so that the above-mentioned connection between people and the city becomes firm. As he stated, post-modernism is the continuation of modernism and going beyond it (Jencks, 1995).[22] Since then, various scientists through surveying and criticising the urbanisation happenings of the twentieth century have presented different suggestions for twenty-first century urbanisation, while its basis is variable for non-certain and different conditions.

[22] Bahraini, S.H. (1999), p.122

2.2 The 2000 Charter

In 1978, Allen Jacobs and Donald Applyard offered a statement entitled *Towards an Urban Designing Manifesto*, which discussed the values of the Athens Charter and the philosophy of modern architecture, and then presented the values originated from the beliefs of Lewis Mumford, William White, Jean Jacobs, and Victor Gruen.

Jacobs and Appleyard believed that the city is a public place with an environmental diversity that should offer various opportunities to its citizens. In order to create and establish such cities, the density should be increased. In their view, the city square is the most important element, not the road and paths. The applications should be designed in connection with each other in a way that they can define urban space and the street and they discussed the problems that seemed were inspirational sources for the designers of the 2000 Charter.[23]

Another example of the same thinking and suggestions was presented in 1995. with ten suggestions presented for urban living designs[24], with its basis premised on partnership: process, general space, location sense, scale, culture, time, history, activities, selection and specialists are the ten factors, which have been offered for urbanisation, and it considers urban design as the product process, through which people form their environment city essence (against village or suburb) is in its elements, public spaces and installations. It is implied that location characteristics are made up of all senses, not only sight. Smell, sound, and a sense of security in comprehending urban spaces are also as important as sight.

In the above ten suggestions the emphasis is on different scales (city, district and locality), diverse functions, various cultures, and the identity has a certain importance.

[23] Mohammadzadeh, T. H., (2000), pp.12-24

[24] Bahraini, S. H., (1999), P.59

The activities are the reasons for the city to be alive and public spaces should be provided for urban activities and happenings.

The 'diversity' principle is very important in increasing the selection rights of citizens. In addition, improving the quality of urban life requires the interference in the city's structures and processes and such issues make the role of specialists very important. However, while all the above factors, together with people's opinion and partnership can work well, it did not pay attention to the Athens Charter.

The 2000 Charter sought a way to form an urbanisation statement for infra-industrial society in the next century, which was based on a backward look to the past and taking lessons from the experiences, and suggested paying attention to the existing situation and the future, through keeping uncertainty in mind.

Although, the Athens Charter's discussion scale is much wider, the number of its principles is more than the seven principles allocated to the 2000 Charter. It is not clear to what extent this charter can attract city constructors' attention or to what extent it can convert to the applicable principles. Nevertheless, as we are at the beginning of the twenty-first century, the present problems of our cities necessitate some statements of the 2000 Charter type and can be paid attention and compared with the similar issues. The 2000 Charter was presented at the "Urban Designing, Reviving Cities' Form" conference in Philadelphia, United States of America in 1993. Its goal was to state the best designing ideas, practical success methods and new methods according to new transformation.

The statement providers imply that the 'New Athens Charter' statement was offered for organising the urban design in the future. They believed that at the time the Athens Charter was formulated, urban design was based on theories related to the time, but now it had become obsolete. For instance, no longer could mechanism be stated as the main goal of urbanisation and/or high buildings of a similar form and structure could not be the solution for housing problems any more.

The seven principles of the 2000 Charter can be summarised briefly as follows:[25]

Principle 1. Urban locations should have positive effects on people's lives.

The positive specification of the cities should be such that it can provide various paths for obtaining income, studies, offer culture, the opportunity to become aware of other cultures and offer leisure opportunities to its citizens. All these specifications demand that the human dimension is fully catered for.. The negative aspect of these specifications is vulnerability. Urbanisation should also find opportunities to display various cultures and different activities and to reduce related dangers and threats. For example, in redesigning Bryant Park in New York, entrances and exit paths were designed in such a way that they can be seen from the inner part of the street. They also increased park activities, so that through compounding different activities and exposing park angles, they can increase their control of the park's functions.

Principle 2. City residing should be in co-ordination and co-operation with natural systems.

In an era in which we cope with so many environmental problems, it seems that an 'ecological correlation' paradigm is necessitated. Human culture should behave better with natural systems than this. Here are the issues that Jonathan Barnett suggested must be addressed to reach a desirable and integrated environmental state, under the name Environmental-Zoning or Performance-Zoning: the preservation of finite resources such as oil, gas and coal, a reduction in heat and coldness losses in buildings and a reduction in these key resources consumption in transportation. Waste water and its pollutant effects can be overcome by replanting and developing green spaces. The maintenance of natural resources has positive effects on water, air and soil quality and provides safe places for animal and plant species. For example: in 1993, when designing residential and administrative complexes in Sterling Forest, located 40-miles north of New York, several cluster forms of the fore-mentioned buildings were designed which retained 75% of the

[25] Mohammadzadeh, T. H. , pp.20-22

forest, preserving it as a safe place for animals. The distance from living place to work location was minimised.[26]

One of the important issues about the relationship between man and nature is natural disasters and urbanisation has to attempt to reduce the effects of these disasters, such as earthquakes, storms and fires, to the least probable extent. Another important point is to create green spaces inside cities and to make citizens more familiar with natural systems, so that they learn how to be eco-friendly towards them.

Principle 3. Urban societies should have their own distinct and allocated characters.

The standardisation of manufacture, commerce, finance and production structures has tended to make urban environments similar. Urban areas and buildings in the cities throughout the world are often very similar to each other, but for different peoples and cultures, it is better to design buildings in different forms. City identity and characteristics of culture, region, tradition, functions and formal character originate from the previous decisions. Each part of a country has a different history. Considering the independent identity of regions and cities is very important. Regional differences should also be considered. Cultural differences can originate from race, age, language and so on. Specific activities may cause differences, take a theatre or an art gallery for instance.

Designing standards and development strategies' differences can originate from different economical and political conditions. Formal differences imply geometrical programming; refer to order and to adjusting architectural traditions etc. Therefore, overall through considering several of the aforementioned factors, the identity of urban societies can be indicated distinctly.

[26] Charter 2000, 1993, P. 324

Principle 4. New urban forms should respond to social requirements and behaviours that are transforming.

As the society changes, new building patterns should also respond to these alterations. For example, a new connection between house and occupation or house for active old aged people; traditional thinking on land use, which emphasises the functions of separation, all these need to be changed towards integration and connections.

By increasing density, the application of different approaches to residential issues, and paying more attention to the pavements, we can move in such a direction. Urban development can reduce dependency on automobiles and encourage people to use other transportation methods. It means that the more people try to use public transportation systems, the more integration is established, for example, a complex of mixed developments and multi-usage, with streets designed for pedestrians and vehicles could support an expanded transportation network. Such a development, through concentration on suburban living environments, removes traffic from saturated systems and city centres, supports expanded transportation networks and creates a balance between work and residences and offers occupational opportunities in the region.[27]

Principle 5. The opportunities to select transportation types should be various and accessible to all the people.

In North America, high dependency on the personal automobile has resulted in a great amount of pollution. The suburbs have expanded irregularly (sprawl phenomenon) and friendly viewing of the urban locations has been lost. In addition to private automobiles, movement should be possible by other means of transportation. People move by bicycle (opportunities to ride bicycles and walk safely should be available) light rails, small and big buses, on foot and various transportation services. Efficient movement and transportation also relates to the other decisions; for instance, residential

[27] Cal Thorpe, 1991

density, the distance between work place and home should be proportional with various transportation types.

Principle 6. Construction processes should be included of different forms and be influenced by people with different tastes.

There should be co-ordination between specialists, citizens' partnership and representative groups in programming; since more urbanisation designing processes often increase costs and cause delays to work schedules. New models to simplify construction and renovation are required, while interested parties and beneficiary groups also should be considered.

Principle 7. Restoring the existing urban spaces to be used once more is as important as expanding new spaces.

Investment in restoring the existing structures reduces development costs. In addition, renovating existing spaces can increase their efficiency and the effects of such an approach can expand all over the city. Perseverance seems logical to the goal of creating proper locations and logical costs. Irregular physical expansion of the city and widening scattered suburbs often is inefficient and prevents easy access to the greenery around the city, for example, in Misery, Kansas City, USA a big supermarket in a city suburb was re-expanded inside the city, so that it acted as a catalyst in the city, thereby constructing houses, creating jobs and making connections to commercial and social services in the city centre.[28]

In brief, the following tendencies and emphases can be seen clearly in the 2000 Charter:

[28] New York Times, April 14, 1993

1. The moral values and dimensions of man's life should be given more consideration.
2. There should be an emphasis on a stable living environment which is the main basis of decisions in any urbanisation process;
3. An effective and expanded circulation of informational technology in designing process is required;
4. Attention should be paid to the history and cultural legacy plus the necessity of historical continuity;
5. There should be an emphasis on people partnerships in decision processes;
6. Urban designing scales should be made smaller with the goal of making spaces more useful for people;
7. The expansion of the existing urban spaces and reviving urban structures is preferred;
8. Urban density and a mix of activities and applications should be increased;
9. Diversity, pluralism and denying the standard driven approach.

Table 2-3 illustrates all the viewpoints of both supporters and compilers of the charter and specifications of the 2000 Charter.

Table 2-3 Specifications of the 2000 Charter
Source: The author, 2005

City problems and existing difficulties at the time of designing the 2000 Charter	1- Relative removing of house problem, but adding new requirements such as house beauty and diversity 2- Green spaces have been increased but the lack of security in parks and public paths is a serious problem. 3- Traffic problems still exist and time is wasted by not only short distances between junctions but also by unlimited physical expansion of the cities and suburbs. 4- Living environmental pollution has intensified. 5- Increasing crime, murder, divorce, suicide, and mental disease exists in the cities; 6- The similarity of areas and cities, together with their lack of identity has created a sense of loss of specific locations. 7- Class differences in different areas still exist.
Ways of looking at the city in the 2000 Charter	1- Three scales in the city; In addition, the city can be studied in its ecological context and has close connections with the living environment. City co-ordination with natural systems is considered very important. 2- Each city should indicate its own specific identity regarding environmental, cultural, historical, political, economical, and social differences. 3- The city should pay attention to the moral aspects of man through a flexible and non-mechanistic view.
Theories of the Charter 2000 (general view of the designers)	1- Ecological proportion; 2- Various house forms with different densities; 3-More private mechanism affects urbanisation than do governments. 4- Four main functions plus other issues and problems such as local integration; 5- Denying separations and suggesting a mix of functions; 6- Independent identity for regions and cities through considering national, racial, and cultural differences; 7- People partnership in urbanisation processes is accepted as an important principle.

2.3 Comparison of Two Urbanisation Methods (Modern and Post-Modern)

Modernism is formed following renaissance, reform and Humanism and was the centre of human excellence and his wisdom. In this era, wisdom converted to a termination that in its frame, rationalism and positivism can offer a true measurement from correctness and incorrectness of the cases and accounts. Therefore, wisdom intellectuality, experimental observation and settlement became a foundation for recognising physical, biological and social facts in experimental and social sciences. In such a space, heavy flow of the criticism about Carl Popper and others resulted in establishing Modernism. Post-Modernism is born from modernism and enlightenment age.

From an historical point of view, post-modernism has a close connection to the Romanticist philosophers, the spiritual sciences and philosophers of Germany, especially Max Weber and his conceptual method (Verstehen), the hermeneutic approach (Ricer), dialogues (Michel Foucault), infra-narration (J. F. Lyotard), and so on. Modernism and post-modernism ideas were expressed in different fields: literature, art, architecture, social theories as well as urbanisation.

After the First World War, important social and urban problems such as class divisions, increasing poverty, growing urban mother regions, and suburban residences were evident all over Europe. After the world economic crisis (1929-32), based on the Athens Charter (1933) the application of a differentiation among matrix, non-matrix was emphasised in urban life and regional allocation become important in urbanisation, through using modern technology and city construction specialists. The Amsterdam Comprehensive Plan (1934), which was executed one year after the Athens Charter's approval, assumed an important focus point in modern urbanisation.[29]

[29] Mohammadzadeh, T. H. , p.22

In the 1960s, criticisms of modern urbanisation reached its highest level. It was believed that by returning to history it was the best approach for treating the damage of the modern era. From that point, location lost its importance and reviving historical regions' values, variety, together with preserving and reviving old cities and constructing new cities similar to old cities, with the emphasis on social customs and values, was given a higher position. The city and culture were considered as a text. Therefore, in the 1960s, criticism of intellectuality, the application of similar and mass structures, physical consideration of urban structures and life planning became popular concepts whereas, pluralism, a variety of interests, a denial of widespread theories and leaning on unique reality all inclined. The outcome of such a post-modernist tendency was partnership designing, paying attention to the social sciences and taking advantage of historical symbols and reviving historical structures in urban planning.

Overall, post-modern urbanisation rejected basic principles of modern urbanisation, e.g. social engineering, finalism, predictability, expansion, widespread wisdom, cause and effect and the tendency toward determination. Instead, it faced the critical region allocation, forgiving nobility, relativity, productivity, variety, local and subjective planning, lack of concentration, location supporting, and native designing by proxy planning, people partnership and so on.

Table 2-4 Comparative Survey of Modern and Post-Modern Urbanisation
Source: The author, 2005

Modernism	Post-Modernism
1- Interrupting the connection with the past and concentrating the view to the future	1-Supportive of history, historical memory, civilisation
2- Removing structure, universalism, model making, being neutral about values, style and decoration	2- Framework, special attention to the situation and location, region allocating, native designing, pluralism, folklore, urban identity and culture
3- Integrity concerning wisdom, application tendency toward machine metaphor, 'less is more', 'application function form', 'technology' and 'application differentiation'	3- Symbolism application, text and reading metaphor, paying attention to old cities, 'human is the criterion for all things', 'more is more', 'dissimulation function form', denying region allocation or taking advantage of compound region allocation
4- Belief in human release, philanthropy, having political goals, belief in linear development, science, wisdom, technical support, belief definiteness	4- Politics escaping, avoiding crime opposed to utopia and idealism
5- Opposed to capitalism, dependent on government authority and its expanded interference, democratic socialism	5- Opposed to supporting authority, support of small-scale designs, belief in people partnership, opposed to expanded interference of the government, support of political decentralisation, liberal political economics, new conservatism
6- Art, the tool to achieve political purposes and designer and architecture leadership	6- Art, in the consumers' service, agent and councillor designer and architecture, public services
7- New buildings' construction	7- Returning to traditional and old structures
8- Taking advantage of emotions and sensations in political purposes' service	8- Taking advantage of original emotions and sensations of the family and respecting the family as at centre
9- Especial attention to take advantage of comprehensive plans	9- Local, subjective, relative and strategic programming
10-Emphasis on architecture and city construction specialists	10- Emphasis on local groups and people partnership
11-Widespread, expanded and inflexible planning	11- Limited and flexible planning, framework support, people partnership and avoiding total dependency on specialists

2.4 Comparison of The two Charters (Athens and 2000)

Up to this point, both charters, their principles and contents have been discussed. In addition, the urban problems that existed in their time and their suggested solutions have been noted. Now it is necessary to compare the result of both studies.

1. Looking to the city, the Athens Charter considers the city (and urban phenomenon) as a mechanical system which is constructed through assembling its structural components and elements, so that it is repeatable. Moreover, the view of the 2000 Charter takes an organic view of the city and its untitled elements and considers it as a territorial phenomenon and does not illustrate, define and look to it as truly separated from the living environment and its conditions. Therefore, the city and urban processes live and grow related to its environment and cannot be repeated, simulated or interfere in development affairs, without paying attention to its living environment and its relations.

2. The Athens Charter puts the basis of the city and citizenship on residential housing and housing problems, which critics consider the solution to old structures, to refine and/or provide new lands for urban development, the construction of high building complexes and using its surrounding space (through considering structural features, using technology). However, the 2000 Charter offers its solutions based on this foundation, but the city and urbanisation, based on civil life, is the result of a complex of activities, such as residing. It offers the solution to house problems and its deficiencies. Critics consider time and location conditions, residing manner and methods and other activities and habits common in the city. It considers various house forms with different densities and related to other urban functions.

3. The conclusions to the Athens Charter consider urbanisation one of the responsibilities of architects. It binds specialists to notify opinion and offer solutions for urbanisation, only under architects' leadership and management and considers governments and authorities as the work locator and the determiner of the planned

goals and needs, and the final approver and executive sponsor. It explains such city construction activity in an imperious system between the employer who is the right owner and the contractor (specialist and technocrats). In the 2000 Charter conclusions, it allocates the citizens and the city to different societies in different layers of the city and to its various scales (sub-systems) in the life, energy and movement dominant in the city. Therefore, it considers private and government sectors (a federation of private sectors), the effective power in urbanisation. In addition, based on the above-mentioned issues, it follows methods in extracting needs, goals, design and design execution; the methods that are related to private and government sectors activities. In the one hand, it recognises people partnerships in urbanisation activity and processes, besides specialists and architects, and on the other hand, besides accepting the city management and government's role in adjusting the relations (environment), it considers private sector's mechanisms effective and necessary in urbanisation.

4. The Athens Charter, with no attention to the cities identity, allocates four main functions for all the cities: house, work, transportation and leisure. In addition to separating from the city its previous history and values, it looks to the future to separate these four functions. It attempts to provide the aforementioned separation, by creating green space and open spaces -not public- it tries to conform these functions and activities to the definite separated spaces. In the 2000 Charter, it not only accepts basic behaviours and its four activities as the behaviours of urban life associated with them, but also predicts other behaviours and activities in response to human needs Moreover, instead of separating and dividing the functions from each other, in neighbourhoods, it also attempts to establish interference, comparison among them and increase public sites (intermediate space) and mixed applications of the city in different scales (district, area, region and city) and multi-functional spaces plus intermediate spaces (catalyst) are some of its examples.

5. The Athens Charter emphasises standardising behaviours and functions and of city spaces (machine designs from the spaces); and it attempts to obtain optimum, international, repeatable and multiple designs. The high-rise buildings, ways and highways, cross-roads, squares, factories and design types have been expanded all over the world and also urbanisation designs, which were obtained from special and repeatable models in different states plus the system of providing comprehensive and detailed plans, are some of the examples of the Athens Charter's emphasis. In the 2000 Charter, the city was paid attention to as a territorial phenomenon and it allocates independent identity for each territory and so for each city, region and area inside it. Therefore, following native and regional solutions and models of pluralism and variety in the city constructors, solutions have been considered as a principle.[30]

By expanding such a view from location (specific land) to the time (history and its future), such a variety and pluralism will have a wider range, so that, looking to the past and its variety will show us how we can offer various solutions and different methods of urbanisation for an urban phenomenon in a country. Tables 2-5, 2-6, 2-7 and 2-8 have been offered for this purpose.

Regarding the issues presented in both charters and especially in comparison to the different aspects, dimensions, conditions and problems that existed at their respective times of publication, the two charters and their views towards the city plus their basic theories, it can be said that both charters are the result of a transformation in urbanisation thinking. These charters have been stated as the pivotal points of the urban planning paradigm. The theories of both charters are basically different from and sometimes against each other, but they can be considered confidently as the two key focus points in urbanisation history.

[30] Mohammadzadeh, T. H. , pp.20-24

Table 2-9 provides a final detailed comparison of both charters urban elements and processes and economical, social, political and matrix factors and reveals their basic differences. The issues that have been considered jointly in this table include the most important critical design factors at the time, each charter had priorities and obligations, the effect of economical factors, the urbanisation theory dominant in designers' thoughts, house patterns, densities, urban functions, the role of architects and city construction specialists, governments' roles, private sector roles and city development policies. These issues were responded to differently in both charters and confirm the stated theory in the title of this article.

Table 2-5 Common Aspects of the Athens and the 2000 Charters
Source: Mohammadzadeh, T.H. (2000), p. 22

* Existing situation in the cities is not acceptable to both charters.
* Both charters consider their point of view as a focus point in urbanisation history.
* Both charters attempt to answer existing urban problems and questions and offer suggestions for development processes.
* The solutions both charters suggest to overcome urban difficulties (e.g. the problem of availability) have a spiritual similarity to each other.

Table 2-6 Comparison of Urban Conditions and Problems and the Difficulties that Existed at the Time of Designing Both Charters
Source: Mohammadzadeh, T.H. (2000), p. 24

The Athens Charter	The 2000 Charter
* Priority of housing problems: bad housing situation and housing shortage in the conditions after the First World War	* Relative solution of house problem: but adding new needs such as house beauty and variety
* Lack of green space in the city and spaces for passing leisure times	* Green spaces have been expanded but the problem of a lack of security in parks is serious.
* Intensive density of the traffic and considerable waste of time * The gap of social ranks in urban regions	* Traffic and access problems still exist and are no longer the result of lack of distance between junctions (which the Athens Charter had discussed) but are caused by the unlimited physical expansion (sprawl) of the cities and suburbs. * The gap between social ranks still exists in urban regions.
* Intensive air and sound pollution	* Living environment pollution has increased (from acidic rains to the ozone layer being pierced).
* Intensive health poverty in industrial city regions * Interference of industrial and residual applications * Interference of drivers and walkers travel	* Increasing crimes, murders, divorce, suicide, and mental diseases in the cities * Similarity of regions and cities to each other and their lack of identity and losing their sense of location.

Table 2-7 Respective Views of the Problem of the 'City' in Both Charters
Source: Mohammadzadeh, T.H. (2000), p. 23

The Athens Charter	The 2000 Charter
1- The Athens Charter looks at the city in an expanded and comprehensive form and in fact, it considers the connection a residential unit up to whole of the region with the city.	1- It considers three scales of urban, regional, and area in a study of the city. In addition, it considers the city should be studied in its ecological context and looked at it in close relations with the living environment. It assumes the city's co-ordination with natural systems very important.
2- It has inflexible and rigid-mechanic view towards the city. Considers the city as a tool and a machine which each of its components should be placed in a specific location. Form such a view, it thinks of separating four main functions of the city.	2- It believes that each city should be allowed its special identity, considering environmental, cultural, historical, political, economical and social differences.
3- It considers its solution expandable in all the cities and societies and pays no attention to the subjective differences of the cities.	3- It pays attention to the moral aspects of human life through a flexible and non-mechanistic view.

Table 2-8 Comparison of Basic Theories of Both Charters
Source: Mohammadzadeh, T.H. (2000), p. 23

Charter / Description	The Athens Charter	The 2000 Charter
Main Theories Of Designers Of Under Comparison Charters	1- Mechanism	Ecological symmetry
	2- High buildings are the most proper form to respond to the increasing need for housing.	Various forms of houses with different densities
	3- Governments are the main power for urbanisation. Urbanisation is the responsibility of architects and only specialists are qualified in urbanisation processes	More than Governments, private mechanisms play a role in urbanisation. People partnerships are accepted as an important principle in urbanisation processes.
	4- Four main functions exist in urbanisation, which should be separated decisively from each other.	Four main functions exist plus other issues and the problem such as a sense of integration
	5-Historical cessation and looking forward; Standardisation of city environment and the buildings; International style and similarity of urban spaces.	Denying the separation of applications and suggesting functions' interference; allocating independent identity for regions and cities by considering pluralism: national, racial, cultural and valuing historical legacies and proper usage of past values and its composition with new techniques.

Table 2-9 Detailed Comparison of the Two Charters, with Urban Elements and Phenomenon and Economical, Social and Political Factors

Source: Mohammadzadeh, T.H. (2000), p. 24

Description / Under Comparison Charters	The Athens Charter (95 principles)	The 2000 Charter (7 principles)
1. The most important factor of critic in the time of charter designing	Machine entrance and speed phenomenon (transportation speed, exchange speed, density, and traffic interference)	Living environment crisis and energy crisis
2. Main priorities and obligations	Responding to mechanism and speed phenomenon (solving the problem of traffic slowness), responding to housing problems in post war Europe	Reducing energy consumption, development costs and pollution and responding to the ecological proportions
3. Effect of economical factors	Following modernism's economical philosophies (standard following, making similar and equal)	Following post-modernism's conditions of infra-industry (pluralism) and ordered production according to people's request
4. Dominant ideas on designers thoughts	Modernism Movement	Post-Modernism Movement
5. House pattern	Constructing high buildings with distance between them	Variety in house types
6. Density	Reducing density on the ground and creating open spaces	Density increasing and creating urban condensed structures
7. Nature	Establishing urban green spaces and being in contact with nature in leisure times	The city should be integrated with natural systems. (nature all-out importance)
8. Urban function	There are only four main functions which should be separated completely.	Four functions plus other factors such as identity or sense of location.
9. Urban planning and designing	Providing comprehensive design plus fixed and determined core monies (inflexible plan)	Flexible designs in local scale and proportionate with the situations of each region (variety and flexibility)

Table 2-9 Detailed Comparison of the Two Charters, with Urban Elements and Phenomenon and Economical, Social and Political Factors

Source: Mohammadzadeh, T.H. (2000), p. 24 *(Continued)*

Description / Under Comparison Charters	The Athens Charter (95 principles)	The 2000 Charter (7 principles)
10. Architects' role and urbanisation	Architects manage the city entirely.	Planners, designers, and city managers act with the help of active partnership of people.
11. History and culture	Looking at the historical valuable elements as museums (separation from the past)	Allocating special importance to history and culture (historical continuity)
12. Government role	The government has the main role in urbanisation. (Budget and power.)	Private sector of people organisations and the government
13. Private sector benefits	Private benefits should be under dominance of public benefits.	Because private sector pays more costs, its benefits should be the first priority plus benefits to beneficiary groups
14. Urban development policy	Allocating development priority to new regions of the city - expansion to the suburbs and limits of the comprehensive plan; destruction of old structures and construction of new structures (sprawl)	Allocating priority to the existing structural development and renewal and avoiding further expansion of the suburbs (infill-planning)

3

CHAPTER THREE

FRAMEWORK AND METHODOLOGY

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3. FRAMEWORK AND METHODOLOGY

3.1 Theoretical Framework

3.1.1 Introduction

If we go to professions other than architects and planners to search for a deeper understanding of the lack of living public spaces in most areas of contemporary cities, there is generally little interest in the question. In North America, if asked, many would blame it on poverty, drugs and crime, the homeless and the gangs: in short, the undesirables. In North-Western Europe, the weather would be blamed, although this is only partly true, as is shown by the growth of downtown public space in the last decades.[1] However, in Iran, the blame is on the interference in the city's issues, which in its very nature is imperative. This approach, rather than letting the potential capabilities of an urban setting generate its own required public space, has generated the lack of such space in major cities, the most prominent of which is Tehran.

3.1.2 Urban Space as a System

If urban space is considered as a living entity, which can create within itself its required needs, then this might help to create more desirable public spaces. A system may be regarded as an entity that is relatively freestanding in relation to other entities. To say that urban settings are social systems is to say that they exhibit socially generated patterns in the way they function, and in the way, the various component parts mesh with one another. Just as the body is comprised of a range of different organs to perform the vital functions necessary for its survival and growth, so the urban setting requires autonomous space capable of fulfilling functions necessary for its equilibrium and development. The attraction of this model in an urban setting would be to emphasise the key importance of

[1] Gehl, 1987

differentiation between urban spaces and their specialised function and organisation. In other words, it reveals that different spaces perform different functions.

In identifying the basic social functions that social systems must successfully perform if they are to survive, Parsons focused on four. The first involves adaptation to the external or natural environment from which scarce physical resources derive, or, put more simply, the economic function. The second is called goal attainment, meaning the political utilisation of resources to meet particular ends. The third function of integration refers to the achievement of legitimate rules or norms to regulate the entire system, reflected, for example, in law. The fourth function, latent pattern maintenance, is to do with the transformation of values that are shared and stable within a given system.

This four-function theory often referred to by the acronym AGIL, is intended as a comprehensive account of the challenge faced by actors in any social system, regardless of its being large or small. Any social entity may then be regarded as a social system, provided it meets the test of being autonomous in the broader environment.

3.1.2.1 Spatial Analysis of the Urban Setting

Apart from the fact that the urban setting may be looked at from a systemic perspective, it can be investigated through spatial analysis. Space as directly lived through its associated images and symbols, is practically and directly experienced as social space. It may be directional, situational, or relational, because it is essentially qualitative, fluid, and dynamic. Representational spaces need obey no rules of consistency or cohesiveness. It is alive: it speaks.

The experience of space in the traditional emotional and religious manner is formed by everyday life. The space of the everyday activities of "users" (or "inhabitants") is a concrete one. The "users" naively experienced space. The dominated - and hence passively experienced-space - makes symbolic use of its objects. The representational

space is the space that the inhabitants have in their minds. They have their sources in the history of a people as well as in the history of each individual: childhood memories, dreams, uterine images, and symbols (holes, passages, and labyrinths) (studied by ethnology, anthropology, psychoanalyses - although in a forgetful way). People's experience of space originates in childhood; it is produced already in the first year of a person's life, and later through poetry and art.

Representational space, embodying complex symbolism, sometimes coded, sometimes not, is linked to the clandestine or underground side of social life and also to art. Nature and fertility is included in representational spaces and tends towards non-verbal symbols and signs. Absolute space survived as the bedrock of historical space and the basis of representational spaces (religious, magical, and political symbolisms). Only products of representational spaces are symbolic works - often unique. In Roman times, representational space was dual in character: masculine / feminine. In Rome, women, servants, slaves and children all had their own lived (representational) space. Antiquity's representational spaces have survived.

Spatial practice is empirically observable. It is readable and/or visible. Like all social practice, spatial practice is lived directly before it is conceptualised. Social and spatial practice is a reality; it is a *habitus*. A spatial practice must have a certain cohesiveness, but this does not imply that it is coherent (in the sense of intellectually worked out or logically conceived). The specific spatial competence and performance of every society member can only be evaluated empirically.

Spatial practice is the practice of a repressive and oppressive space, consisting of the way space is appropriated; the way space is dominated and including the way the body is appropriated and/or dominated. Spatial practice embraces production and reproduction. In spatial practice, the reproduction of social relations is predominant. Under neo-capitalism it embodies a close association, within perceived space, between daily reality (daily routine) and urban reality (the routes and networks which link up the places set aside for

work), private life and leisure. This association is a paradoxical one, because it includes the extreme separation between the places it links together. Thus modern spatial practice might be defined - to take an extreme but significant case - by the daily life of a tenant in a government-subsidised high-rise housing project. Users and inhabitants are marginalised by spatial practice to the extent that we lack well-defined terms.

The spatial practice of a society secretes that society's space; it propounds and presupposes it, in a dialectical interaction; it produces it slowly and surely, as it masters and appropriates it, i.e. the network of roads; motorways; the politics of air transport.

Spatial practice thus simultaneously defines: places - the relationship of local to global; the representation of that relationship; actions and signs; the trivialised spaces of everyday life; and, in opposition to these, spaces are made special to particular groups by symbolic means, as desirable or undesirable, benevolent or malevolent, sanctioned or forbidden. From an analytical standpoint, the spatial practice of a society is revealed through the deciphering of its space. In Rome, it is dual in character: the Roman road links the urban to the countryside over which it exercises dominion. The gate, through which the imperial way proceeds from *urbs* to *urbis*[2], marks the sacrosanct from its subject territories and allows for entrance and exit.

Aside from the French philosopher, Henri Lefebvre (1968, 1974), the New York sociologist Richard Sennett (1990) tried to get public space back. Together they show, that to get life back in these spaces, we have to deal with forces as strong as capital, God and enlightenment. Lefebvre and Sennett - put together here, as far as the author knows, for the first time in one diagram (Figure 3-1) - see the problems of modern urban space on two different polar axes. Lefebvre focuses mainly on the contradiction of abstract space versus differential space; Sennett mainly on the contradiction of spatial inwardness in accordance with spatial outward-ness. These spatial contradictions - if crossed - can

[2] Urbs and orbis are two ancient Roman meanings of the city and its suburbs respectively. See Lefebvre, H. (1991).

define different aspects of our city of interest, and state our problem of public space in general terms.

According to Lefebvre, we live in a capitalist society that has a general tendency to turn the formerly absolute space of nature and early human culture into abstract space. Capitalist space is produced as a commodity and as distribution networks. Therefore, seen from an exchange point of view, it should be as "general" as possible. The right-angle repetitious geometrical grids of the North American city can partly be seen as an example of this tendency. Industrialised mass housing and mass office building are other obvious examples. However, repeatedly, economic competition and political struggle create a contradictory space, adding new differences to the original differences of space given by nature and history that so far have not been completely "neutralised". In this way, according to Lefebvre, spaces of difference are produced to some extent, although the general tendency is the production of abstract space. Since the 1960s, to some extent, differential space has also been produced because of the growing importance of leisure and non-labour - a tendency of growing importance that may lead to a paradigmatic change in the concept of space.

According to Sennett, we also live in a capitalist society, but as he does not believe in Lefebvre's political ideas of great political revolutions, Sennett has to focus differently in his spatial analyses. If the capitalist economic "mechanisms" cannot be changed within a reasonable time, or without too large human costs, then the struggle for a better city has to be primarily cultural - not primarily political-economical. This interpretation of the differences of Lefebvre and Sennett's basic points of view has to be included in the understanding. That the struggle for a better city is in vain without a cultural perspective, is also Lefebvre's point of view, as he sees no attractive cultural quality in socialist city building so far, but the cultural perspective is not the starting point of his analyses.

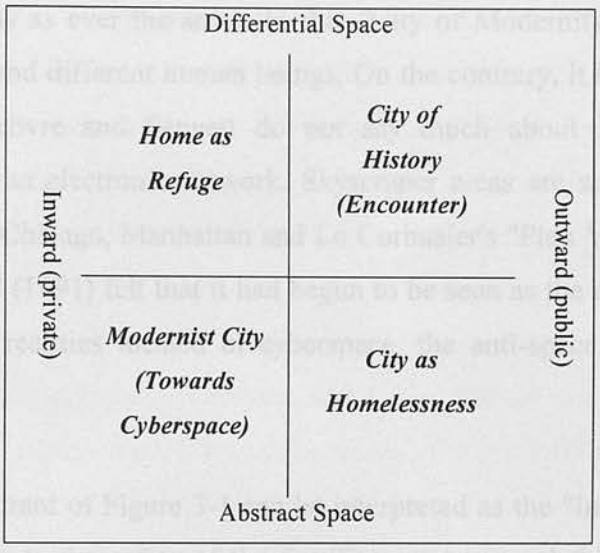
The statement of God and enlightenment as the main villains in Sennett's universe must be further explained if we are to understand him correctly. The God in question is

the Christian God, and the problematic aspect of enlightenment is its quest for a Grand Unity of everything. For Sennett, the common denominator of Christianity and enlightenment is the perversion of the relation between inside and outside in a way that promotes inwardness and cripples outward-ness. The problem of Christianity goes all the way back to the early Middle Ages, as expressed by Augustine's rejection of the worldly city in favour of the city of Heaven's. The problem of secular enlightenment, on the other hand, is its attempt to overcome contradictions by escaping them in the name of unity, or by trying to enforce brutally a non-contradictory unity. This, of course, is doomed to fail. Inwardness continues as a result. To Sennett, the inward-outward axis of orientation is related to the questions of relations between private and public life (and private and public space), as well as to the relations between the self and the others in more general terms. Sennett wants to turn people outward instead of inward - towards the streets and the encounter of human differences - instead of towards the home and psychoanalyses with or without professional help. Arguably, Sennett thinks it is both necessary and possible to break out of the mutual contradiction and unity that is a driving engine in most of Woody Allen's films - the alienating metropolis and a growing need for psychoanalysis.

Nevertheless, to turn outward, Lefebvre would say, is extremely difficult in a society based on private ownership to capital and land, and in a society dominated by large corporations and public bureaucracy. In spite of that, Lefebvre would agree that every possibility to turn outward should be catered for. In the end of *The Production of Space,* he actually mentions the possibility of a reformist strategy towards differential space and a new society.

We will return to Lefebvre and Sennett's conceptions of the city but before that, let us look at Figure 3-1.

Figure 3-1 Modern Urban Space Problems
Source: Krier, Rob, (1979), pp. 34-35



The Abstract Space/Differential Space dimension in Figure 3-1 can be seen as an axis of spatial production, the Inward/Outward dimension as an axis of spatial orientation. The crossing gives us four quadrants:

The first quadrant can be interpreted as the "City of History" in a dual sense - both as the historical pre-modernist city of streets and squares, which is as old as the preserved history of human societies (about 10,000 years) - and as the city, where time makes a difference. This is the city of encounters with other humans in real life, and encounters with cultures of different times.

The third quadrant - the diametrically opposite - can be interpreted as the "Modernist City." This is the city of advanced capitalism: an urban anti-space of isolated and inwardly-oriented built objects sprinkled in a technological landscape, interwoven with distance-keeping lawns to look at, simulating naturalness, and simple countryside pleasures. Although this city is heavily focused on time - trying to catch up with time all the time - it kills time, as it can only develop through the destruction of history and

through repetition. This is the reason, why Berman's book on modernity (1982) got its title from Marx' and Engels' Communist Manifesto: *All that is solid melts into air.* Modernity is the new as ever the same. In this "City of Modernity", there is not much encounter with real and different human beings. On the contrary, it becomes increasingly clear, although Lefebvre and Sennett do not say much about it, that the ultimate "Modernist City" is an electronic network. Skyscraper areas are still being built in the image of downtown Chicago, Manhattan and Le Corbusier's "Plan Voisin". In describing this issue, Rheingold (1991) felt that it had begun to be seen as the ultimate modern city, made up of virtual realities located in cyberspace, the anti-space of real experiential space.[3]

The second quadrant of Figure 3-1 can be interpreted as the "Indoor Private Home", where we can escape to the safety of the familiar, our personal things and the shallow depths of spatially and socially contained intimacy. This is not to say that we do not need homes, or that the heavy focus on housing in the modernist city has been all wrong. On the contrary, the home is necessary for the development of individuals. At the same time though, the home is a trap if it is not complemented by a city of encounter. Today, the threat to the family is not located so much in the streets, as it is in homes of isolation.

The fourth quadrant can be interpreted as the "City of Homelessness" - in the dual sense of an outside world that we do not care about, and a home for the homeless.

3.1.2.2 Abstractness and Inwardness vs. Urban Possibilities

Abstract space is intended to generalise exchange value. Consequently, space is planned in a way that contradicts the promotion of difference. Town planning and building codes contribute largely to enforce homogeneity.

[3] Rheingold, 1991

As for inwardness, if we focus too much on inwardness, people are separated from the differences and similarities of the self with other people, and in the end, they become alienated to themselves. We get lack of solidarity and psychological problems. If we do not experience ourselves in direct relation to others, the others become unreal to us and we become unreal to ourselves too. It is a big problem. Our society has been extremely afraid of difference in real life. At the same time, the large need for difference is shown by the obsessive focus on difference in entertainment and sports through various kinds of media.

Much urban sociology and urban geography have spread confusion on the urban question, not only Second World War regionalists like Mumford, but also left-wing intellectuals of the last two and a half decades. Manuel Castells killed the city as a theoretical object at the beginning of the 1970s.[4] However, it turned up again in the form of "collective consumption", and then metamorphosed into the question of spatial and social practices of "everyday-life" routines.

Lefebvre was there all the time, writing on "everyday-life" already in the 1950s. From 1968 to 1974, he took up questions of the city - not only in relation to different modes of production, as seen from a Marxist "systemic" point of view, but also as an urban experience of humans living in the city - the city as lived space. He even claimed the city as a human right. Later he had to focus on the role of the modern state.[5]

In his last book on the city - *The Production of Space* - Lefebvre emphasises the human need of difference as a counter-weight to everyday routine, and the decisive role of difference in opening up new social and political opportunities. As capitalism creates contradictions in urban space, spaces of difference emerge, that can be transformed into counter-spaces of new human possibilities. If we cross-read thoroughly his books on the city and on space, we will find that the important qualities of differential space and

[4] Castells, 1972
[5] Lefebvre, 1968 and 1974

counter-space have to do with aspects like social and other human differences. The meeting of strangers, human works as unique objects, possibilities for the unplanned, unpredictability, inter-change and inter-active communication, as well as the use of all senses are common examples of this work. All of the fore-mentioned items should be human rights in urban space, according to Lefebvre. However, there is not much to learn about an urban design of difference in Lefebvre's books. He also believes that architects, and especially urban planners, normally harm the subject instead of making any improvement.

Sennett's characteristics of his urban spaces of interest resemble those of Lefebvre's in many ways - including the encounter of strangers - but Sennett explicitly mentions the street, as the most important general aspect of the city. When it comes to the question of urban design, Sennett is also as negative about the professionals involved, as is Lefebvre. Although Sennett tries to find the keys to an urban design that makes a difference, he does not come up with very much of direct practical use either. He clearly is in favour of discontinuities and non-linearities in social space as well as in physical space, but nobody can learn how to build cities from his book. Either the distance from theory to practice is too far, or his advice is already better described elsewhere in some of the more practical urban design literature. Nevertheless, the facts remain that the urban spaces of encounter, differences and possibilities, which Lefebvre and Sennett have pointed to, need to be further investigated, as well as the knowledge and the design practices that can promote them. To focus on the city of encounter is to focus on strangers, randomness, chance, the unexpected, discovery, adventure, etc. - and it is to focus on the space outside, that is, to focus on the streets of cities.

Cities, as physical entities, are often seen in opposition to nature, but in nature, as well as in the city, both ordering and chaotic processes are at work. In addition, both develop through time. The result is complexity. Today, man has already altered almost all parts of nature. Man does not live any more in the original first nature (not man-made) but in a second nature (man-made). The city can be seen, in fact, as the most complex

part of this second nature. First nature, as well as second nature, starts from rather simple forms, and develops towards the more complex. The same is true of the capacity of the individual in his or her development from childhood to maturity. As human beings with roots in nature, we cannot live with pure order. We cannot live with chaos either. We can only thrive in complexity, that in which it enables us to form its required space.

Both first and second nature need a differential space for complexity to develop and to remain. It is at the edges of difference that life develops most intensely, whether that is, for example, the edge between a forest and a meadow or the edge between private and public space, such as buildings and streets.

The transitional stage bridging the gap of first and second nature is the human body itself. The body is the key to humanity, to human complexity, and human space. Whatever mental differences between people - based on different social and economic conditions, culture, individual differences, preferences, etc. - we all have bodies and understand, more or less consciously, that this is the starting point for all of us. Further, we all have had a childhood that in the beginning was body without consciousness. Our ability for sympathy and empathy is related to the body. To accept our bodies and wish the best for them, is the key to humanity. However, it is not enough: the urban condition of strangers is another.

The body is itself very complex, and includes rhythm, symmetry, front-back, left-right, up-down, body and limbs, warm-cold, colours, growth, ageing, sub-consciousness, etc. - and it directly affects clothing and housing as well. The latest knowledge on the information handling of the human brain- and nerve systems shows that the capacity of our bodies is far larger than our consciousness. Our senses receive millions of bits of information every second, but our consciousness can only handle about 16 bits a second.[6] The rest of the information handling is subliminal. The question of sub-consciousness is

[6] Nørretranders, 1991

thus much greater and far more general than Freud thought. Human beings are only partly in control of their bodies. Much philosophy and religion has denied the body, often with disastrous results.[7]

3.1.3 Gesellschaft vs. Gemeinschaft[8]

The comprehension of space has to start from the body, because this is where our human experience starts. Space gets its qualities and quantities through the body. Our body is not like that of a bird, a snail, or a fish. Therefore, our spatial experience is not related to being in general, but specifically to the human body.

Concepts of thought and the uses of language are developed in relation to bodily practices as well. Lakoff and Johnson (1980) have shown that metaphorical language is the vehicle of consciousness and builds on elementary bodily experiences. This is why it is possible to say that the body is in the mind.[9] Experiences that we cannot handle directly, we understand and express through metaphor (and metonymy), and this at the same time constitutes a common basis for creativity applicable to both science and art. That is to say, we handle complexity through metaphor, and by metaphorical creativity, human reality grows ever more complex.

Society includes the question of complexity too. Tönnies' concept of a polar axis of society as expressed in the opposition of *Gesellschaft* to *Gemeinschaft* is here an especially interesting one, and Asplund (1991) discussed it. To explain it briefly, *Gemeinschaft* is the traditional kin-based village society, while *Gesellschaft* is the money-based society of strangers in the city.

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[7] Lefebvre 1974, Nørretranders 1991

[8] *Gesellschaft* and *Gemeinschaft* are two German terms meaning community and society respectively. See Tonnies, Ferdinand (1970).

[9] Johnson, 1987

The bridges between *Gemeinschaft* and *Gesellsehaft* are money and the individual. Both took on a new importance at the end of the Middle Ages through the growth of trade and the division of labour.[10] The individual is a phenomenon related to the development of a money economy. Money makes the free individual possible, which in turn, further promotes the money economy. This adds a new level to complexity. Not only is there a personal history behind every individual a history that is unique - but individuality as a general category is in itself historical. It emerged in antiquity; almost vanished in early Christianity; reappeared in the late Middle Ages and was reinstituted with the birth of the Renaissance. In the 1960s, the transformation of industrialised western man to individualisation had come so far, to the extent that almost every child had a bedroom of their own, i.e. a built space of their own - a situation unprecedented in human history. From this stage, the question of individuality increasingly became a double one: - from depending upon a growing separation, to the double question of separation and relation - from the focus on the "I", to the focus on the relation between "You" and "I".

In the city this question necessarily includes the issue of people that you do not know: people from other city districts, anonymous people, strangers, foreigners, great numbers of people and different cultures, too large for anyone ever to get to know them all. In this situation of *Gesellschaft*, humanity and humane development is related to the acceptance of strangers, not only to maintain peace, diversity, and creativity but as a condition for the further development of individuality as well.

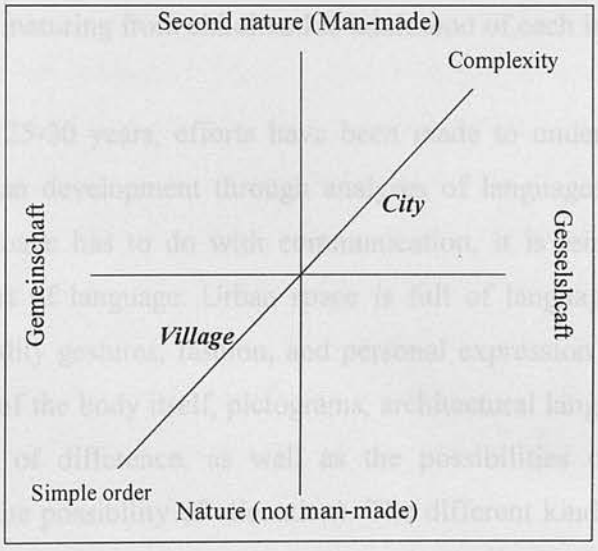
Simmel already understood almost a century ago (1903 and 1908) that an important part of urban social relations has to do with strangers, but twentieth-century sociology has focused almost entirely on the interaction between inside groups and classes as a collective phenomena and not on the interaction of individual strangers. Psychology on the other hand has focused on the individual, either in relation to family experiences or on the relation between the individual and the physical environment. Therefore, the subject

[10] Asplund, 1983 - Nørretranders, 1991

of the meeting of strangers in urban space has been given only sporadic attention. Asplund has recently pointed to the importance of "elementary social life" and elementary social responsiveness, which can take place also among strangers.[11] He has further noted that randomness and coincidence has become an integral and essential part of the urban conditions of life that is of *Gesellschaft*.[12]

The perspective (Figure 3-2) on social relations has been too narrow also in other ways. Beginning in the seventeenth century, a mechanistic worldview developed (because of Newton's discoveries, etc.).

Figure 3-2 A Perspective on Social Relations from Simple to More Complex Forms
Source: The author, 2005



Although this worldview started to disintegrate with early twentieth-century physics, it continued to influence society. It so happened, that the mechanistic perspectives of modernist architecture and city planning reached its full development at the very moment when the mechanistic perspective broke down in modern physics. Within the mechanistic

[11] Asplund, 1987
[12] Asplund, 1992

modernist view, the city could best be compared to a machine, and as a consequence, urban development had to be looked upon as strategic planning, where one decision-centre knows what is best for people and therefore can plan for them (essentially without asking them). Habermas' critical discussion of modernist rationality has a lot to do with this and he now favours a theory of communicative action.[13]

Habermas' communicative actions originate in *Gemeinschaft* too, but first really become a problem in *Gesellschaft*, with its growing complexity. A focus on communicative action - contrary to strategic action - as a model of social development has deep consequences for the understanding of cities, as has Habermas' complementary notion of system-worlds versus life worlds. The concept of communicative action makes it possible to take into account both normative and expressive social processes, as well as the socialisation and maturing from childhood to adulthood of each individual.

During the last 25-30 years, efforts have been made to understand complexity in architecture and urban development through analyses of languages, especially through semiotics.[14] As language has to do with communication, it is tempting quickly to go further into questions of language. Urban space is full of language: spoken language, written language, bodily gestures, fashion, and personal expression of clothes and other attributes as well as of the body itself, pictograms, architectural language, etc. Languages enforce the notions of difference, as well as the possibilities of identification and encounter (but also the possibility of alienation). The different kinds of language add to the complexity of urban space. Although semiotics may have something to contribute to all kinds of language, it is important to note that spoken, and especially written language is only one part of the spectrum of languages, and that different languages have different backgrounds and different rules. Visual and musical languages are quite different from spoken and especially written languages. As the city contains all kinds of language at

[13] Habermas, 1981 and 1988
[14] i.e. Gottdiener and Lagopoulos, 1986 and Nyman, 1989

once, a study of the city as language is an immense task, which is very difficult to undertake.

3.1.4 The Questions of Complexity

The notion of complexity is difficult to grasp in practical life, and even more difficult to handle theoretically. Today, information theory and "chaos" theory has a general understanding and definition of complexity, although there is no general way to measure or compute it in practical life.[15]

Complexity is neither simple order nor a complete mess. It is something between order and chaos, and it grows at the edge of chaos. A complete mess or chaos cannot be represented in any shorter or more compact way than the mess itself. A simple and static order on the contrary can be represented as a short formula. Complexity is different from both of these and although it often is a result of rather simple formulas too, it includes iterations, the repetition of patterns - taking part of the result of the former round as the input to the next - and most often also adding some randomness to the process. This means that complexity is a result of a process unfolded over time. From the point of view of information theory, complexity is the result of information that has been discarded. Only in special cases is it possible to figure out the kind and amount of discarded information. This is why there is no general way to measure or compute complexity in practical life.

The new theories of chaos and complexity, which have been developed since the late 1970s and with the necessary help of computers, are changing our view of the world and the view of us.[16] They show that complex patterns can grow from simple formulas, i.e. fractal patterns, and that many processes are non-linear, discontinuous, and irreversible. The forming of structures or patterns over time that is neither simple nor completely

[15] Nørretranders, 1991
[16] Gleick, 1987

chaotic is the creation of depth. To humans this is related to meaning.[17] This becomes important as the new theories cover several scales at once, also scales relevant to the size of man, unlike the theories of most modern physics that tend to concentrate on the scales of the atoms or the universe. Suddenly, science is related again to immediate experiences of everyday life.

From all of this, we might begin to understand that we cannot escape complexity. We have to learn to live with it. However, what should be understood as complexity from an urban design point of view?

The social complexity of the city must be understood as *Gesellschaft*, not as a collection of *Gemeinschaft*. This is not easy to do right away, as urban planning in the twentieth century has focused so heavily on the promotion of *Gemeinschaft* through the construction of family dwellings and neighbourhood units.[18] Social complexity cannot be fought by making the city less complex though, as this will reduce outward activity and increase personal psychological problems. Lack of outward complexity will also hit the weakest groups hardest, because they will be left with the worst parts of abstract space.

The physical complexity of the city first has to be seen as a street phenomenon. Streets are at the same time the general ordering structure of the city and the kind of space where urban encounters can take place on a wide scale in everyday life. Physically complex urban space in the form of urban streets (as an accessible and easily seen example of public spaces) increases outward-ness: private services as well as outward-oriented, do-it-yourself activities, the meeting of strangers, coincidence of trajectories, etc. Urban streets of this kind, that at the same time contain the possibilities of incremental change, further the creative aspects of *Gesellschaft*, while abstract space or physical complexity understood incorrectly, will further the destructive aspects of *Gesellschaft* (alienation, crime, etc.). In *The Metropolis and Mental Life* (1903), Simmel

[17] Nørretranders, 1991
[18] Franzén and Sandstedt 1981, Grönlund, 1989

has pointed to both the creative and destructive aspects of *Gesellschaft*, so this is nothing new - but, with a few exceptions, there has been no reasonably developed understanding of this in relation to the planning and design of cities. When, for example, Åke Andersson (1985) discusses creativity and the city, there is not much focus on outdoor public space - the perspective is most often institutional or technical (i.e. infrastructure).

Rapoport, an anthropologist, explicitly has dealt with complexity, though before the most recent scientific concept of it, and not as a dominant aspect of his theories.[19] He has pointed to, for example, the very different basic conditions of motorist highways and pedestrian-based streets. The last need to have a lot of complexity at several different scales at once so as not to be boring.[20]

Hillier and Hansson (1984) show that the nature of the complex geometrical pattern of urban space has a profound influence on the distribution of people's movement and the location of activities; most modern space being highly segregated[21], while older, deformed street-grids are normally integrated. Hillier (1989) has also shown that highly integrated outdoor urban spaces, containing people in a socially undifferentiated way, constitute a virtual community of possible encounter. Urban streets are essential to Hillier's concept of urban life, but Hillier's theory does not include absolute population density (and therefore not the social effects of crowding), nor does it include what goes on in the city at heights above approximately 2 metres (i.e. the level of the eye). Neither is he interested in what the facades look like, except the number of entrances. On the other hand, Hillier's *Social Logic of Space* includes an understanding of the generation of complex social-spatial patterns from a combination of simple rules and randomness. In Hillier's theory, depth of space is also very important (being counter-integrative). This spatial notion of "depth" is quite different from the historical (time-based) notion of "depth" in the theory of complexity.

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[19] Rapoport, 1977
[20] Rapoport, 1987
[21] i.e. fractal according to Batty, 1991

Eneroth and Wangsjö (1991) also have contributed to the understanding of complexity of social relations in the city, especially concerning sexual relations. Situations that are partly chaotic are unavoidable, necessary, and in fact, consciously created and institutionalised. They call this the meeting places of incompletion, the meeting places of "keeping apart", etc. - places of simultaneous chaos and normative rules, with the possibility of partial involvement and easy withdrawal.

As complexity has to do with processes, time is a necessary and important dimension. What matters in urban space is time that makes a difference. Benjamin developed an understanding of this already in the 1920s and the 1930s.[22] Time that makes a difference is what Benjamin's dialectical seeing in the Arcades Project is all about.[23] To sense and understand how time, objects, and traces of the past have to be present otherwise, there are no points of reference, no support for critique.

Modernity's relation to time often goes against complexity though. Berman (1982), as mentioned, has shown that modernity is the tragedy of destruction in order to create the new as ever the same. In this way, post-modernity has to run in front of modernity. It is inherent to modernity to try to reduce complexity, because modernity wants everything to be new. Sometimes it succeeds with devastating consequences.

Through a developed notion of complexity, the questions of the theoretical status and usefulness of the concepts of human ecology and urban ecology may possibly also be interpreted anew. Does the decisive aspect that unites the general concept of ecology with "human ecology", as it was understood by the Chicago school of urban studies in the 1920s, create complexity? In addition, maybe the understanding and liking of complexity can save the "urban" in the "urban ecology" of today from being anti-urban from the outset.[24]

[22] Benjamin, 1982
[23] Buck-Morss, 1989
[24] Grönlund, 1993

At this point, we are faced with the difficult question of what kinds of cities we want, a question that does not become easier, as we in the twenty-first century have built so much already. The amount of floor-space built since 1920 is enormous, and unprecedented in human history. The quality of urban space is another matter.

The question of complexity of urban design certainly has to be broken down into groups of detailed and specific aspects, which cannot be discussed here. They have to be elaborated further through research programmes. Here, only some starting points for an urban design of complexity will be indicated.

From a social point of view, the city of complexity is identical with the city of social diversity, interwoven with some social homogenisation in various areas. Diversity should be seen as the dominant aspect, homogenisation being accepted to some extent as a spatial expression of different subcultures of choice. Social homogenisation through standardised abstract city building promoted by the state or by corporations should be avoided, as this will create an anti-city, which most easily can be compared to institutions like prisons or to company towns.

Social diversity has proved to be quite difficult to build into new city areas, although it increasingly has become a goal. Socially mixed housing is hard to achieve in practice for many reasons:

- a segregated housing market with several different financing and economic support systems;
- the scale of operation of public and private planning and construction agencies;
- publicly enforced penalties and premiums adversarial to moving from one dwelling to another;
- a lack of a unified taxation system in metropolitan areas, as they normally are split up into different communes with different taxation-levels, that have little to do with the level of services.

Although it is not easy, large-scale housing segregation can and ought to be countered. The means to do so have been described many times, and shall not be repeated here.[25]

The question of the integration of dwellings with services and places of work in new city areas has proved to be even more difficult, also, where it has been programmatically wanted. The large size of many contemporary units of work is part of the problem. The difficulty to plan for them together with housing is another. Services and places of work cannot be dictated to move into new buildings, unless they are all public enterprises. Public enterprises can be no general solution, though - only supplementary - as we need to stabilise the public sector from a taxation point of view, to release the potential creativity and activity in people, and to promote marked-based private services.

We have seen that large contemporary places of work kill public space. It should be remembered though, that the large corporations do not contain the majority of jobs in the contemporary city. Most of the jobs are to be found in small and middle-sized firms, and in the public sector. Although it is often true that the public sector also has a built-in tendency towards hugeness and centralisation, this can be challenged and changed politically. What is most important is that the large numbers of new jobs are in very small firms, while the large private corporations lay off people through automation: the ultimate robotised corporate factory or electronic office having almost no people working there at all.

Today, many of the newly created jobs in small firms are invisible, as they often take place in inward-oriented homes. This may reduce the possibilities for their further development: for co-operation, for direct advertising in urban public space, for interplay with the public, and for activities that need shop or workshop kinds of spaces. The only

[25] See e.g. Grönlund, 1986.

real advantages of dwelling-based small firms are reductions in the costs of rent, less commuting, and the possibilities to overlap work with family duties.

The last two could be taken care of in the traditional street-shop environment, with shops at ground level and dwellings on the first floor. The main obstacle is the cost of renting floor-space for work. This brings us back to the financial basics of contemporary societies and new construction, as well as to taxation systems that hamper the establishment of small firms. The potential for many places of work are there, if properly taken care of. It is not the primary task in this thesis to fight for financial and taxation changes - others have to take on the major burden of this - but to argue for the re-introduction of the kind of streets, that can contain a lot more activity and complexity, if supported by economical changes as well.

3.1.5 Grand Unified Plans and Designs

If social diversity versus social homogenisation is the major issue of social complexity in the city, then the major issue of physical complexity probably is the axis of "Grand Unified Plans and Designs" versus "streets of incremental change". "Grand Unified Plans and Designs" has been the dominant tendency of city planning and architecture since the beginning of the Renaissance period. The Italian city of Ferrara of the 1490s is probably the first modern city in this sense and at the same time, witnessed the first street killing on a grand scale through the building of completely inward-oriented palaces at the most important street crossing of the new city extension.[26] "Grand Unified Plans and Designs" were further strengthened through the succession of Baroque, Enlightenment and modernist ideas of building.

The implementations of "Grand Unified Plans and Designs" have had their vicissitudes since the fifteenth century, mainly because of economic difficulties, and the degree of centralised government - the states of absolute monarchy and the twentieth century corporate states being the most dominant promoters of these kinds of plans and

[26] Zevi, 1960, Benevolo, 1968

designs. The more decentralised and democratic the state, the less evidence there is of "Grand Unified Plans and Designs" and the more incremental physical additions and change we will find - although it is not therefore true the other way around.

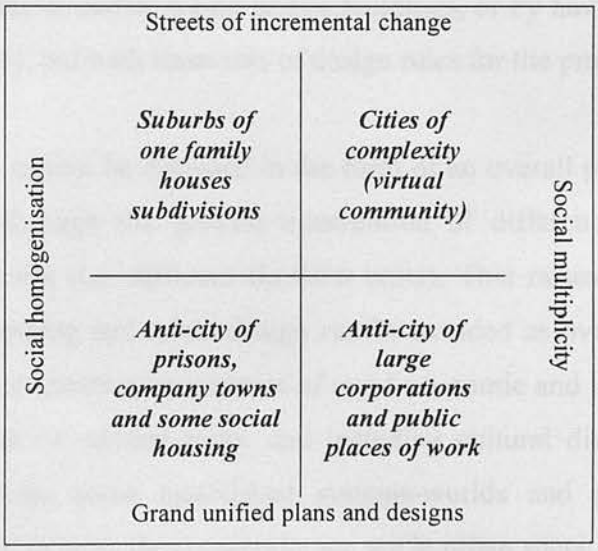
One important reason, that makes the mixing of social groups and the mixing of activities, dwellings, services and places of work so difficult, beside the reasons mentioned earlier, is the way modern cities are planned and built as "Grand Unified Plans and Designs". This is precisely where the killing of streets and their necessary re-birth comes in.

Streets (as an example of public urban space) can have two different basic kinds of characteristic: the absolutist or corporate street, with a strong tendency towards physical homogeneity, or at least with a strong willingness to decide almost everything about the street from one centre of decision-making. On the other hand, the democratic incremental street was accepting of physical heterogeneity and decisions with many centres. Accordingly, there is a correlation between the physical appearance of the street and the place of decision-making processes. Some corporations and public agencies want to build streets today that look physically complex, through decision-making at only one or at a very small number of decision centres.

The question of incremental additions has been raised before, for example, by Christopher Alexander in his *New Theory of Urban Design* (1987), but it has not been raised consequently, from the point of view of the urban street. The city of true complexity has democratic incremental streets and a street pattern with a high geometrical integration (measured with Hillier's space syntax method). These streets create a virtual community of potential encounters of strangers. New York's Greenwich Village is an example, which shows that contemporary art and culture do not grow best in modernist space, but in old industrial streets.

The fourth quadrant of Figure 3-3 - the possibility of simultaneous social diversity, "Grand Unified Plans and Designs" - was more difficult to label, than the rest. The only union of social diversity and "Grand Unified Plans and Designs" we immediately can think of, are in the built work-place structures of large corporations and large public administrations themselves - but here the free admission and initiatives of people are severely restricted. The functioning of these structures is also mainly inwardly oriented towards the organisations themselves. Therefore, they are "anti-city".

Figure 3-3 Grand Unified Plans and Designs
Source: The author, 2005



If it is true, that social diversity is impossible in "Grand Unified Plans and Designs" at the level of the city, then urban planning and architecture have to do some serious rethinking. In the end, we find a new polar axis, a new overall contradiction that contains the essence of the urban question today. This is an axis between the third quadrant of the first cross (Figure 3-1) and the first quadrant of the third cross (Figure 3-3) - or to spell that out: between the modernist city and the real city of complexity. This, at the same time, is the axis of electronic virtual reality tending towards cyberspace, versus a virtual real world community in Hillier's sense of the outward, urban street-form of possible real encounter and the open solidarity of strangers. This axis is not an axis that we can choose to have or not. As the coming of virtual reality is unavoidable - and it is almost already

here - the only thing we can possibly do to create a balance, is to complement virtual reality, as much as we can, by building real city streets.

If complexity is a result of a historical process, it can be questioned if urban complexity can be designed at all. As the notion of "Grand Unified Plans and Designs" has pointed to, we very often think of urban planning and design as an all-comprehending, integral and complete single project for a part of a city including several buildings, a part of a street network complete with furnishing, etc. These kinds of plans and designs most often reduce complexity, although some complexity can be included or added by keeping parts of earlier nature and/or buildings, or by having several architects working independently, but with some sets of design rules for the project.

True complexity cannot be designed in the form of an overall project, though. It has to grow piecemeal through the gradual intervention of different actors representing different economic units (i.e. different decision units). This raises the question of the degree that urban planning and urban design can be avoided as overall integrated plans and designs: a difficult question in societies of rapid economic and technological change, coupled with the lack of cultural roots, and including cultural diversity. Besides, this question might threaten some established systems-worlds and professions as well. Systems are to be seen as core, the complexity we see in urban space production.

Architecture was originally not a profession but a way to build, according to the needs and desires of man and in the context of the surrounding environment. This is why we can talk about architecture without architects. On the other hand, the ways of building, like most other things, including language and technology, grow increasingly complex, thriving on the division of labour and the growing complexity of society. Insofar as architects will be able to sell their services - on the free market - to clients of incremental and fragmentary streets, the profession of architecture has a future from a general city point of view and not only with regard to some monuments here and there.

Finally, incremental and fragmentary streets need not necessarily be ugly. Harmony and homogeneity are to some extent necessary for an aesthetic experience to take place, but changes and breaks are necessary too. The question of ugliness - as of beauty - is a double question of aesthetic ideals and communicative action, including the question of languages of architecture and the character of the decision-making process. It also includes the question of time and the speed of change - as the dialogue of architectural expressions in real life streets takes place at the slowest of all paces in human society. The question of architecture as a language should be seen as a dialogue between buildings through time.

Today, the greatest difficulty of implementing incremental streets (again, just as a very visible form and example of public spaces) is our impatience. We want everything finished once and for all, but as incremental complex city streets only become possible as a process of historical development, we ought to allow this process to take its time and learn how to live in the unfinished. The alternative to unfinished streets will often be dead streets.

3.1.6 The Systematic Study of Urban Complexity

Not much systematic study and evaluation have been made of the simultaneous question of social and physical complexity as aspects of urban design - as far as we know - although the question pops up partially here and there, mostly in an implicit way. There is a great danger that the "rules" of the games of planning and architecture today are not corresponding to the appropriate levels and kinds of complexity that are stimulating to urban people. Because of this, there is a risk that, for example, deconstructionist design theories favour certain kinds of architectural and urban complexity that may have a negative psychological and social impact.

Most architectural and urban design theories that include aspects of complexity do so mainly in a physical way, without much idea of how physical complexity might influence

social complexity. Few theories of social complexity integrate aspects of physical complexity, other than in a negative way as a setting for crime, etc. - as expressed in metaphors like "the jungle of the metropolis". The city is to be seen, however, as a complex, a system that needs to be given a mechanism to produce the required public space.

Architectural and urban design theories mainly look at physical complexity in relation to the task of the single artist, not in relation to a collective process and a process unfolded over time. The result is that planning, urban design and architecture decide either too much or too little, or both at the same time in the wrong combinations. How, one might ask, can investigations into the urban design of socially and physically complex public spaces be undertaken?

At the first stage, non-architectural theories and aspects of complexity in general and especially urban complexity have to be collected, ordered, critically reviewed and listed in a concentrated form. The first stage being non-architectural, hopefully, makes it possible to get relatively stable points of reference outside the world of architecture and urban design itself.

At the next stage, investigations can be carried out on two different levels:

1) Critical studies might be undertaken of existing theories of urban design, extracting aspects and methods that seem to promote streets of complexity, at the same time criticising theories of design that lead to different kinds of abstract, inward-oriented, too homogeneous and "grand unified" city building. (This does not imply that all aspects of partial unities have to be thrown overboard.) The urban design theories to study and discuss here ought to be selected for both their possible positive and their possible negative impact - in a double quest to promote life and complexity and to fight paralysing simple order.

2) Thorough empirical studies of selected city districts and streets to extracting aspects and methods from real life experience. These studies ought to be from different parts of cities with different histories and typologies. They certainly will have to include the new city districts built with the intention to create urban streets, and older city districts with streets full of life and complexity. At each level, it is necessary to look at both the physical and the social aspects of complexity, and postulated relations between them. In this way, the basis for the further development of theories and methods of an urban design of complexity can be developed.

Empirical studies might be possible with a combination of methods developed by Hillier (1984), Gehl (1991) and others. However, as soon as the practicalities of such empirical studies occur, the critical assessment of urban design theories, in combination with more general theories developed by the human sciences - as there can be no empirical study without some kind of implicit or explicit theoretical basis - and it should be explicit. This is the point when a systemic approach comes to assist a better understanding of urban design and planning, through its perspective on how a system can reproduce itself once the potentiality and the mechanism is recognised.

3.2 Methodology

To accomplish this research, a range of various methods has been employed. The reason for this is the multi-dimensional nature of this study. This methodological combination consists of survey research, participant observation, content analysis and a documentary method.

3.2.1 Survey Research

Surveys can be divided into two broad categories: the questionnaire and the interview. In this study, the questionnaires have been set in two forms:

i) a questionnaire for the non-experts and the residents of the Navvab quarter (referred to hereafter as the general questionnaire);

ii) a questionnaire for the experts and the specialists, those who have been either engaged in administrative urban planning and work, or those who have been involved in academic, research works related to the topic of this study, (referred to hereafter as the specialised questionnaire).

There are many reasons to justify this research methodology:

Surveys are useful in describing the characteristics of a large population. They can be administered from remote locations; consequently, very large samples are feasible, making the results statistically significant, even when analysing multiple variables, many questions can be asked about a given topic, giving considerable flexibility to the analysis. There can be flexibility at the creation phase in deciding how the questions will be administered: whether as face-to-face interviews, by telephone, as group administered, or as a written or oral survey. Standardised questions can make measurements more precise by enforcing uniform definitions upon the participants and they ensure that similar data can be collected from groups, then interpreted comparatively. Usually, highly reliable information is easy to obtain - by presenting all subjects with a standardised stimulus, observer subjectivity is greatly eliminated.

3.2.2 Documentary Method

This method is amongst the measures that are known as unobtrusive or non-reactive measures. As one aspect of this study copes with the historical changes that took part in the city of Tehran, in order to deal with this aspect, the documentary method has been applied to make the events related to the background of the case study clearer. It is worth noting that this method has been employed solely to deal with the historical background of the case study so that descriptive accounts of the historical events can be presented.

3.2.3 Content Analysis

Many printed documents have required examination. In order to highlight the facts in these documents and texts, content analysis has been used as a research method. These documents mainly consist of the press articles and the reports and information produced in the field of urban planning. In the present study, this method is employed for descriptive analysis and at the same time, it provides the means for causal analysis. It provides three levels in the reality network: objective, subjective and expectation levels.

3.2.4 Participant Observation

Ostensibly, participant observation is a straightforward technique. By immersing him- or herself in the subject under scrutiny, the researcher is presumed to gain an understanding, perhaps more deeply than could be obtained, for example, by questionnaire items. Arguments in favour of this method include reliance on first-hand information, the high face validity of data, and reliance on relatively simple and inexpensive methods. This method has been employed to overcome the imposition of an externally conceived "scientific" measuring device (the questionnaire) on individuals who do not perceive reality according to that external conception.[27] The empirical approach to participant observation emphasises participation as an opportunity for an in-depth systematic study of a particular group or activity[28] with three elements to this approach: i) The enumeration of frequencies of various categories of observed behaviour, as in interaction analysis. Often there is an explicit schedule of observation geared to hypotheses framed in advance of participation.[29] Observer's participation may lead to an alteration of hypotheses and observation schedules; the attempt to observe systematically is ongoing. ii) Informant interviewing to establish social rules and status. There may be systematic sampling of informants, content analysis of documents encountered, and even

[27] Bruyn, Severyn., 1966.
[28] Zelditch, Morris., 1962.
[29] Reiss, Albert, 1971.

the recording of observations in a structured question-and-answer format. iii) Participation to observe and detail illustrative incidents.

3.2.5 Obstacles, Predicaments and Restrictions

This study has encountered certain difficulties and shortcomings that without them, the procedure, form, ultimate quality and the outcome would have been quite different. These drawbacks can be classified into two major groups:

3.2.5.1 Personal Restrictions

1. The professional career and continuous engagement of the author in executive fields provided a good reliable background for carrying out this study, nevertheless it also caused a twenty-year gap from academic work and studies, which, in turn, made the start of studies and research a difficult task. Some time was needed to make the adjustment to the academic world and its requirements, a matter the author had not given a second thought to in advance.

2. The author realised that some alterations to his work and routines were required and he resigned in summer 1999 from all his jobs in the municipality of Tehran and took up this PhD course as his full-time occupation. However, because of the emotional attachment to his family, it appeared impossible to live apart from them for long, yet the author needed to use the amenities and services of the university in order to working on his thesis in a more constructive way. This dilemma caused the most serious restriction to his work.

3. A lack of fluency in English was another major problem from the early stages of the author's work. This became particularly evident in expressing the concepts and assumptions that required detailed explanations even in his mother tongue (Farsi).

3.2.5.2 Restrictions in the Field of Work

1. The lack of classification/categorisation of the documents and texts in the libraries, archives, scientific and research centres related to the author's subject has been the major problem and difficulty of this work. The search for sources, books, technical reports, and architectural and urban projects was time-consuming, costly and ultimately unreliable, to the extent that the investigations and researches on the documents have not been completed much scrutinised. These obstacles became more apparent with the inadequate and non-standard listing and indices of book titles and abstracts, for example, *Hamshahri* was the only newspaper with relative orderly archives that enabled a useful search (and only from 1996 onwards); this archive also provided some scattered information about other newspapers and magazines, classified according to their date and subject. Hence, the searches for documents were repetitive and monotonous work that had to be carried out in various, and sometimes contrasting sources.

2. The lack of collaboration among the staff of the archives aggravated the situation, and unless there had been private and friendly relations with the officials of the newspapers, consulting engineers and other centres that held these documents (in a relatively scientific standard way), getting access to the amount of documents that the author has sourced would have been impossible.
3. The absence or paucity of research on urban issues has caused the public to be unaware of its value and therefore they do not co-operate with surveys and interviews. On the other hand, the public takes it for granted that governmental bodies generally undertake such activities and their opinions would not lead to any significant changes, so they are unwilling to fully participate in interviews and public enquiries (this could be a subject of special analysis and particular social study). Not taking the inquiry seriously and not paying attention to the questions were among the consequential issues in fulfilling this task. Therefore, to overcome this problem, after testing the questionnaire, skilful interviewers in

the field of social sciences and architecture were employed to complete the interviews and the questionnaires.

4. Undertaking the specialised interviews with the specialists and the directors was not an easy task. The main problem was that the level of communication and the declaring of information was closely related to the level of acquaintance with the respondents. Therefore, the people out of the circle of close friends and colleagues with the author were to a certain extent, unenthusiastic and reluctant to take part in the interviews, or to be helpful to fully express their ideas. Because of this, most of them had to be completed in one session, and for some, the interviewer had to bide his time for nearly two months to have an opportunity for an interview. The majority of the interviewees were not pleased to have their interviews recorded. Even though they did not object openly, they were at times quite careful with their words. Accordingly, the researcher had to depend solely on his memory and notes.

Part Two

Case Study

CHAPTER FOUR

THE NAVVAB PROJECT AS THE CASE STUDY

CHAPTER FOUR
4. THE NAVVAB PROJECT AS THE CASE STUDY

4.1 Why Navvab?

The first decade, after the joy of the Islamic Revolution victory (1979), was the time, when the people were finding themselves and their identity. It took one-and–a-half years and the shock of a bloody war, the longest of the twentieth century that inflicted upon the Iranians many losses in the lives of beloved sons and husbands at the front, and of mothers, wives and sisters back home.

The imposed war ended in 1988 based on Resolution 598 of the UN Security Council and the Iranian nation, which had patiently endured the hardships and deprivations of the untimely war, began to demand what it expected of the Revolution and all its promises. The great expectations and high hopes, the utopia, the promised land, the image that from the day after the victory of the Revolution, had been kept alive in the routine life of the masses.

Consequently, no conversation, action or effort was acceptable unless it referred, or somehow pointed to overall growth and development, and the expected rise in living standards. Thus the government, and the newborn regime that had survived the war through the material and spiritual support of the people, had no choice but to respond to the needs of the nation, and to act rapidly and adequately, in those areas that would give quick results to establish the regime's legitimacy and worth.

If the years 1989-97 are called by statesmen and are known by the people as the "construction era" and if the various regional and national construction projects (e.g. dams, railways, highways, motorways, roads, housing, etc.), which were inaugurated and publicised by the authorities, are considered as the symbol of this era, then we shall certainly have to assume that the urban planning efforts and the city designs for the larger cities have all been developed in response to the needs, demands and ideals of the nation.

Tehran has a population equal to 11% of the total population of Iran and 20% of the urban population of the country. In addition, over 24.4% of the country's economic activity and GDP is concentrated in this city. Consequently, the honour and respect of the authorities before the people and those of the state and the nation before the world depend on the city. This is why it has been the scene on which this national demand and political will have manifested themselves.

The development plans, which have been implemented in Tehran, are a reflection of the approach and capability of the country's managers, during the period. This fact becomes more tangible when one looks at it in the light of the circumstances: most of these development and expansion plans in Tehran took place during this period of reconstruction, supervised and supported by the authorities and finally inaugurated and put into use as evidence of the achievements of the "era of construction".

What was done in Tehran during those years, in the various areas of management, culture, economy, social affairs and in the physical aspects of the city, should be taken as a symbol, a practical reflection of the will of the state management and the administration, and of the demands and aspirations of the nation.

Bold decision-making, speed in carrying out performance, innovation, the large scale of projects, enormous efforts, and exceptional performance are clearly answers only to people's basic but superficial needs on the one hand, and to the needs of the management for experience, which are all responses that revealed themselves in superlative expressions such as 'the first, the biggest, the worthiest'.

Among the projects of the management of Tehran's municipality during the era of construction, the Navvab Project has a number of unique characteristics, which make it ideal as an example for this research:

1. The Navvab Project is one of the few to be implemented in Tehran, whose origin proceeds the "era of construction". Indeed, it is among a number of projects which were formulated before the Islamic Revolution, in 1969 (the year Tehran's Comprehensive Plan was formulated). Navvab goes back to the Act on Development of Roads. It is indeed the country's first physical planning ever to be made.
2. This urban project is unique among Tehran's urban projects and it was continued vigorously over a period of seven years from 1990 to 1997, that is almost the entire "era of construction".
3. Before even being completed and put to use as a whole experience, the project was accepted as a profitable one and was adopted by many other municipalities and even other administrative bodies.
4. Navvab is a special urban project - in fact, a collection of diverse projects - despite its apparently simple and humble title. The Navvab Project includes an urban highway that runs through the city, a large-scale construction project, a number of residential complexes, displacement of many urban utilities, the building of many pedestrian and motor access-routes of different scales, changing the city's old traditional pattern, and a new experience in gaining finance for urban development projects. Navvab embraces many different elements and issues or has encountered them during its lifetime.
5. The project is a challenge to the technical and engineering capability of the country, its ability to design and implement, and its technical management potential.
6. For the first time in Iran, the project used a method of financing never hitherto employed, quite different from the conventional financing resources such as duties, the banking system etc.
7. Not only is this project a colossal piece of engineering work and an enormous direct intervention in the physical aspects of Tehran, but it also is an enormous step in financing procedures. What remains now, is answering the vital question: How can we best return the profits back to the project?

8. The Navvab Project was, at the time, the zenith of the reformist tendency in the government arena, a trend that employed the full potential and executive powers, with the aim of satisfying the people and gaining their confidence.
9. Navvab, as a city motorway, poses questions and raises issues never before encountered anywhere in Iran. It runs over a distance of 5.2 km through an area that is old and decaying, to a new section that runs over 4 km and has buildings on both sides.
10. An urban motorway, functioning at a metropolitan scale, which cuts off all the access routes it crosses, must meet new demands. At the same time, new access routes must be developed to answer the changes at city, district, sub-district and neighbourhood levels.
11. This project somehow disrupts the old relations between the neighbourhoods and districts, and brings new links between districts and city regions, in a new context and pattern.
12. The location of the Navvab Project - its proximity to Imam Khomeini International Airport, the Imam's shrine and the roads leading to the southern parts of the country - is such that it is bound to become a major gateway into Tehran.
13. Navvab is a city development project embracing a 5.2-km long motorway, multi-level crossings, and over one million square metres of construction on its flanks, a narrow and long road to be built in a short time, crossing or passing many city elements.
14. The Navvab Project offers an excellent opportunity for enhancing and correcting: the understanding of the concepts of renovation and reconstruction, methods of intervention and planning, and designing and developing a city, by the people involved.
15. The idea of construction on Navvab and around it, the concept of a town development organisation and physical intervention in the city was put into practice and proved an invaluable experience.
16. Navvab is an all-important event in contemporary urban development, and because of its dimensions - a narrow width, great length and vast area - it could not possibly be free of problems.

17. The Navvab Project is still a serious matter in the field of town planning which will affect the two flanks along it and will have lesser effects on the further areas: like ripples, the effects fade with increasing distance.

Finally, Navvab was not a simple case and never will be. It is rather a combination of different issues and subjects of various scales, which can or could manifest itself as a complete and comprehensive case. It appears that a timely evaluation of the Navvab Project may lead to solutions and guidelines for future cases, to avoid possible losses or compensate for them and to view similar projects in different lights.

4.2 Tehran: As the Field

As part of the urban configuration of Tehran, undoubtedly, the area of Navvab cannot be considered in isolation from the context from which it stems. Therefore, before dealing with Navvab, it will necessary to know what kind of a setting Tehran used to be and is as an environment.

Tehran, a city that has lost its identity, today is one of the largest cities in the world and home to some seven million people, and covers an area of about 750 square Kilometres. Today, over 200 years since it became Iran's capital, Tehran is one of the most polluted cities of the world.

Tehran is located on the slopes of Alborz Mountains, extending from the plains of Shahriar and Varamin (south and southwest) to mountains on the north and the east. The northern parts of Tehran lie on the mountainous region of Shemiran. Still further down, the land turns into a plain where the main parts of the city are to be found. From the heights of Abbasabad southwards, extends the Tehran-Ray plain, embracing the central and southern parts of Tehran and the town of Ray. Therefore, the mountains to the north and east were considered to be natural obstacles to the growth of Tehran and to the north

and south too, the desert limited its growth so development to the west was the least limited way for the city's growth.

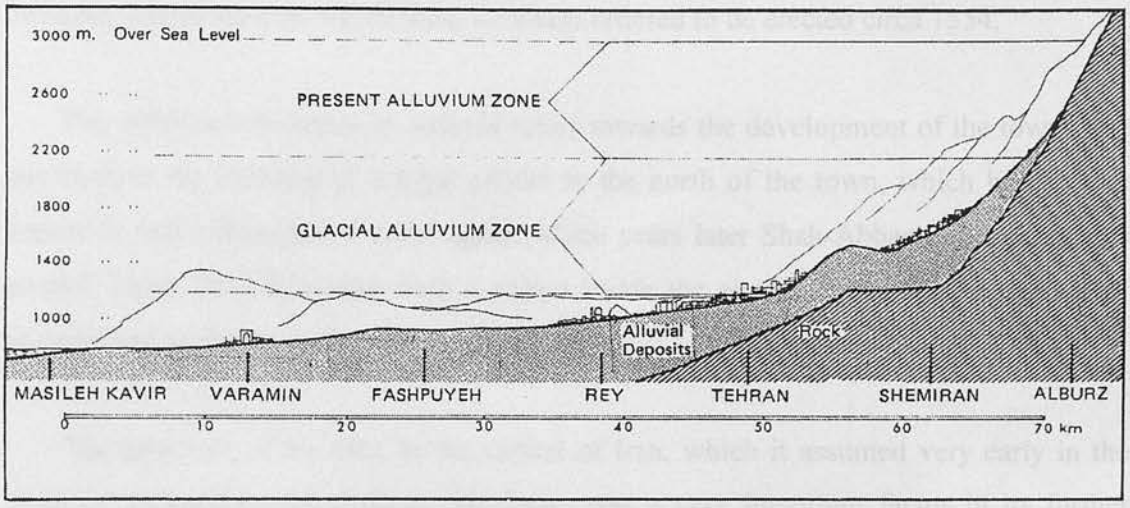


Figure 4-1 Physical Aspects of Tehran
Source: Bahrambeygui, H. (1977), P.5

Before the fifteenth century, Tehran was a small village near Ray, a major city during the ninth-thirteenth centuries (AD) (Figure 4-2) until the transfer of the Safavid capital to Qazvin nearer to Tehran, coupled with the geographic and climatic potential of the small village of Tehran, brought about its growth and development. At the time of Shah Tahmasb of the Safavid dynasty, Tehran, which was until then mostly built as an underground city, became enclosed by a citadel wall.

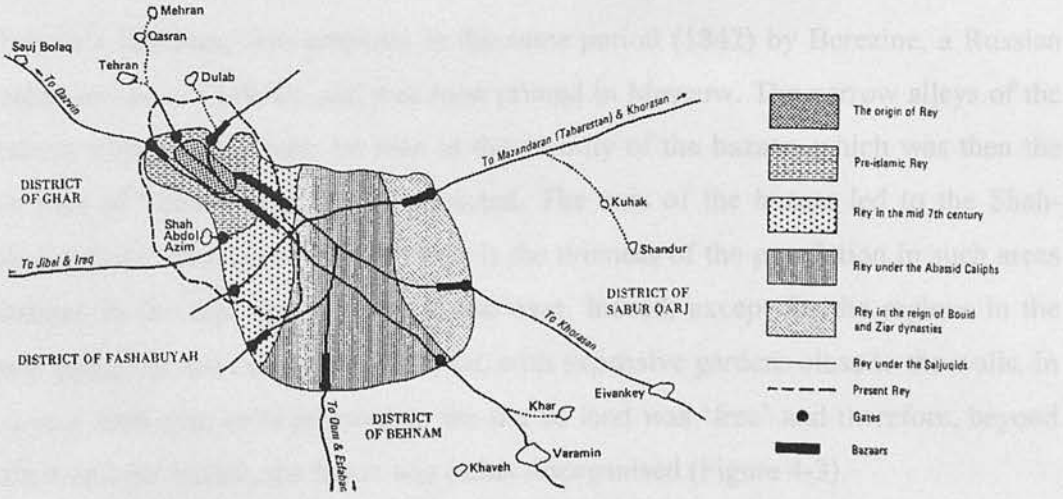


Figure 4-2 Historical Map of Ray and Tehran in Post Islamic Period, after Map of Dr. Kariman
Source: Bahrambeygui, H. (1997), P.10

The first official step towards the development of the city as a result of political and military developments of the time, was the erection of the fortification –a simple wall to be exact- round the city, which Shah Tahmasb ordered to be erected circa 1554.

The other actions taken by Safavid rulers towards the development of the town were confined to the building of a royal citadel to the north of the town, which had a moat around it and a four-lane avenue, again, which years later Shah-Abbas built within this citadel. Later, Shah-Soleiman built a palace inside the citadel, the first of a number of palaces that gradually, were built there.

The new role of the city, as the capital of Iran, which it assumed very early in the reign of Agha-Mohammad–Khan the Qajar, was a very important factor in its further developments and transformation. But, the repair of the wall round the city and the construction of a royal palace were the only developments that took place during the reign of this king.

During the rule of the Qajar dynasty until the reign of Nasseroddin-Shah (1849-1896), Tehran grew and development within the confines of the same city-walls of the Safavid-Shah Tahmasb and many buildings were built there.

Tehran's first map was prepared in the same period (1842) by Berezine, a Russian orientalist and tourist (1852), and was soon printed in Moscow. The narrow alleys of the old Tehran village can clearly be seen in the vicinity of the bazaar, which was then the busiest part of Tehran as might be expected. The axis of the bazaar led to the Shah-Abdolazim Gate. Also clear from the map is the thinness of the population in such areas as Odalajan in the east and Sangalaj in the west. Indeed, except for the regions in the southern parts, the rest of the city was calm, with expansive gardens close to the walls. In such a vast land with little population, the use of land was 'free' and therefore, beyond the palace and the bazaar, the fabric was rather disorganised (Figure 4-3).

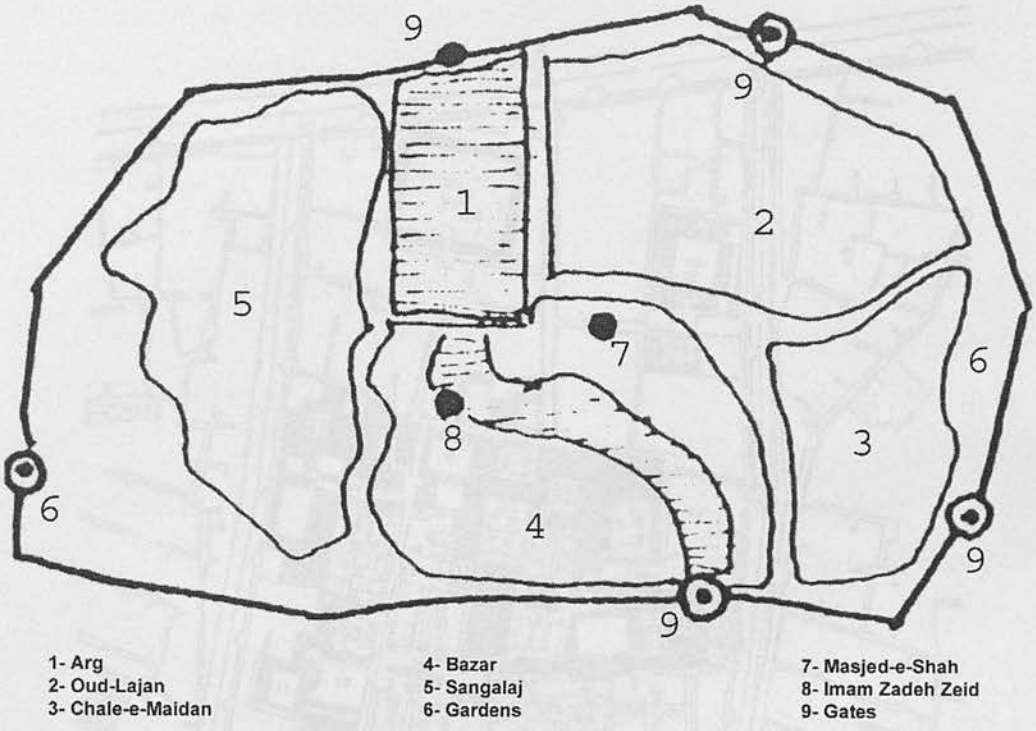


Figure 4-3 The Primary Formation of the Urban Skeleton
Source: Hamidi, M. [et al} (1997), Vol.2, P.10

At the times of Nasseroddin-Shah (1849-1896), many gardens and buildings were created outside the city. During these fifty years, because of the rapid physical growth of the city and the limitations caused by the wall, most royal palaces, mansions, embassies and the residences of foreign people were built outside the fortifications.

In 1858, Augustus Krziz prepared the first map proper of Tehran. This map confirms that there was a great deal that was newly built. The map of the Citadel was also presented in detail (Figure 4-4). It shows that within an area of nine (9) Km.^{2} of the original Safavid fortification, all the gardens except those in the southern parts close to Darvazeh-Ghazvin had disappeared. Six gates can be seen in this map: Darvazeh-Dowlat north of the Citadel, Darvazeh-Shemiran, Darvazeh-Doolab, Darvazeh-Shah-Abdolazim, Darvazeh-Mohammadiieh, also known as the new gate was not indicated in Berezine's map, and Darvazeh-Ghazvin. The only open space was that of Sabz-e-Meidan (ex-Shah Square).

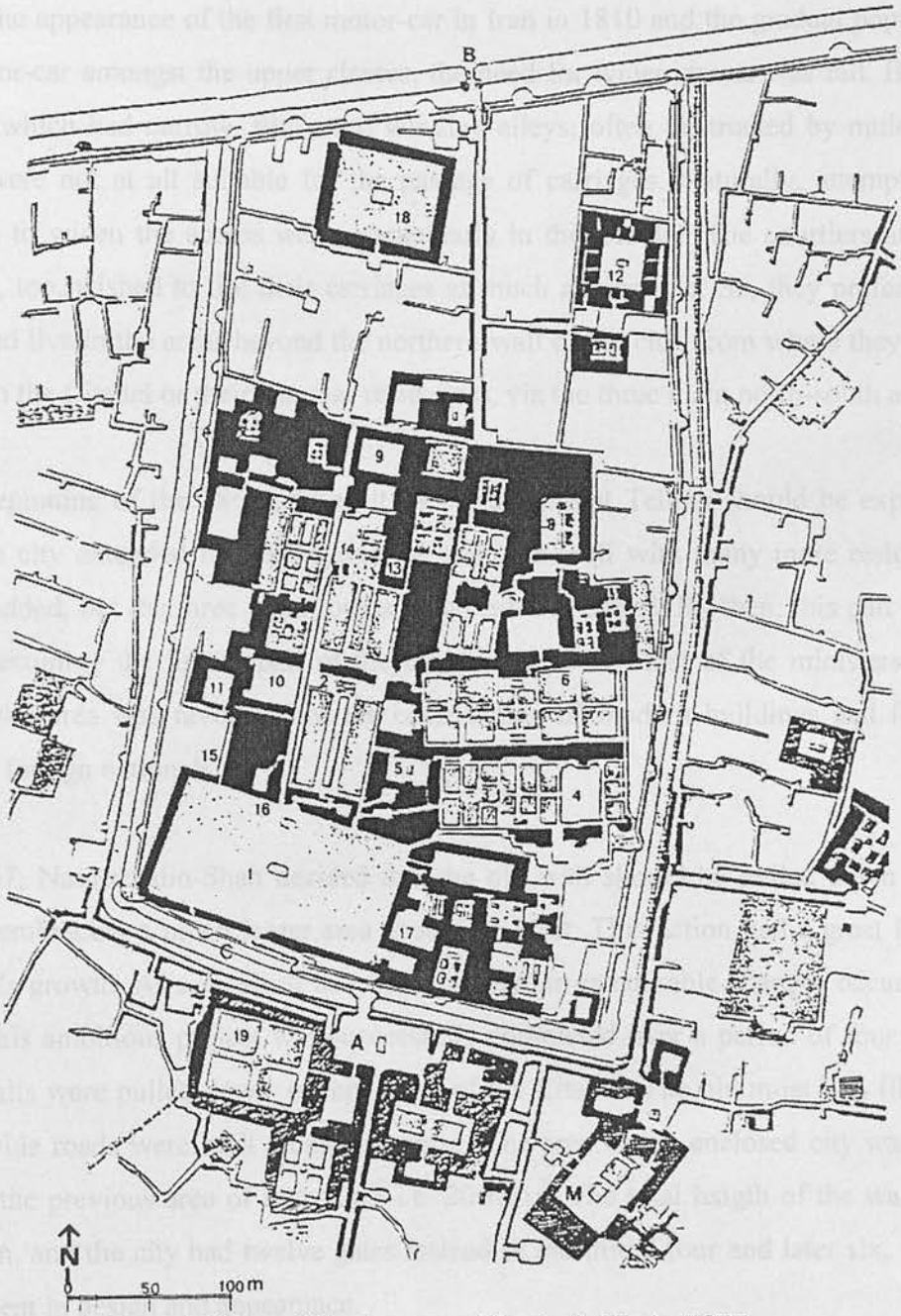


Figure 4-4 Plan of the Arg according to A. Krziz (1857)
1.Meydan-e Arg. 2.Takht-e Marmar Palace. 3. Chehel Sotoun Garden. 4.Lake. 5.Treasury. 6.Mahd-e Olya Resid. 7.Forough ol-Saltaneh Resid. 8.The Resid of the Governor of Tehran. 9.Sarvestan Resid. 10.The Royal Stable. 11.TupKhaneh Stable. 12.Dar ol-Fonun. 13.Russian Embassy. 14.Khorshid Palace. 15.TupKhaneh. 16.Secretariat of the King. 17.Mosque. 19.Arsenal. A-Sabzeh Meydan B-Darvazeh Dowlat C-Bazarcheh Sandugh-dar-M. Mosque of the Shah.

Source: Hourcade, B. and Adle, C. (1992), P.45

With the appearance of the first motor-car in Iran in 1810 and the gradual popularity of the motor-car amongst the upper classes, the need for wider streets was felt. But the old cities, which had narrow, filthy and winding alleys, often obstructed by mules and donkeys, were not at all suitable for the passage of carriages. Naturally, attempts had been made to widen the access ways, particularly in the Citadel. The courtiers and the aristocracy, too, wished to use their carriages as much as possible. So, they preferred to move to and live in the areas beyond the northern wall of the city, from where they could easily reach the Citadel or their summer residences, via the three main north-south axes.

The beginning of the 1860s, when it was decided that Tehran should be expanded further, the city extended further beyond the northern wall with many more residential buildings added, but the three main routes remained unchanged. By then, this part of the city was becoming the luxury part of the city for the rich. Most of the ministers lived there and the area was favoured for the construction of modern buildings and for the quarters of foreign nationals.

In 1867, Nasseroddin-Shah decided that the old wall should be pulled down and a new wall, embracing a much larger area should be built. This action had a great impact on the city's growth. As a result of this decision, certain remarkable changes occurred to the city. This ambitious project was successfully completed over a period of four years. The old walls were pulled down, except those of the Citadel. The old moat was filled in and new wide roads were built along its course. The area of the enclosed city was now five times the previous area of four $Km.^2$ i.e. 20 $Km.^2$. The total length of the wall was now 18 Km. and the city had twelve gates instead of the initial four and later six, which were different in design and appearance.

During the reign of Nasseroddin Shah, Tehran developed and expanded in every aspect, but not all parts developed at the same rate and in co-ordination. The northern parts grew far more rapidly than the other parts of the city. The next largest growth was in the southern parts, then in the west and the least in the east.

In the west, growth was rapid, because of the movements of goods and people to and from the Ottoman and Russian Empires with which Iran had extensive trade. The Customs installations at Ghazvin Gate and close to Tehran-Karaj Road were created for the very reason (Figure 4-5).

Fig. 2.20 Town Plan of Tehran, by Abdol-Chaffar, 1891. Reproduced from an original copy

Figure 4-5 Town Plan of Tehran by Abdol-Chaffar, 1891, Reproduced From an Original Copy
Source: Bahrambeygui, H. (1997), P.24

By the beginning of the twentieth century, Tehran had become Iran's largest city but it was still a very ordinary town of 250,000 inhabitants. During the years of reign of the last Qajar kings, the capital saw no more change and remained quite backward, just as was the case in the rest of Iran. According to Jackson, the capital was, within its walls, a hotchpotch of eastern and western civilisations with that of the east being predominant[1].

When Reza Khan first came to power, Tehran was as it had been at the time of the Qajars (1920), especially as no attempt for development had been made during the reign of Mozaffaroddin Shah, and the size of the city had not enlarged.

During the reign of Reza Khan, when financial and economic conditions improved considerably, the city underwent comprehensive evolution and its physical expansion commenced. During this period, new city functions emerged alongside the previous functions, especially in the administrative and industrial sectors. This phenomenon had considerable effect on the traditional activities in the city. The basis of evolution and development of the city was the emergence of new land uses and city functions, which began with the new century on the Iranian calendar (1921).

During the reign of the first Pahlavi (Reza Shah), the new political, social and economic developments caused Tehran to acquire the profile of an administrative-industrial city. This fundamental evolution, which occurred in the years 1921-41, was the result of actions taken by the state towards the development and expansion of state functions and organisations, as well as social and economic institutions, as means for attaining political-economic aims and to prepare the groundwork for social transformation and upheaval.

[1] Hourcade, B., er Adle ,C (1996), P.214

In 1937, the Ministry of Interior prepared a new plan for the city under the supervision of foreign consultants. This plan was completely under the influence of the modernism movement. The grid pattern, and segregation of land uses and city functions through zoning, were the principles on which the plan was based.

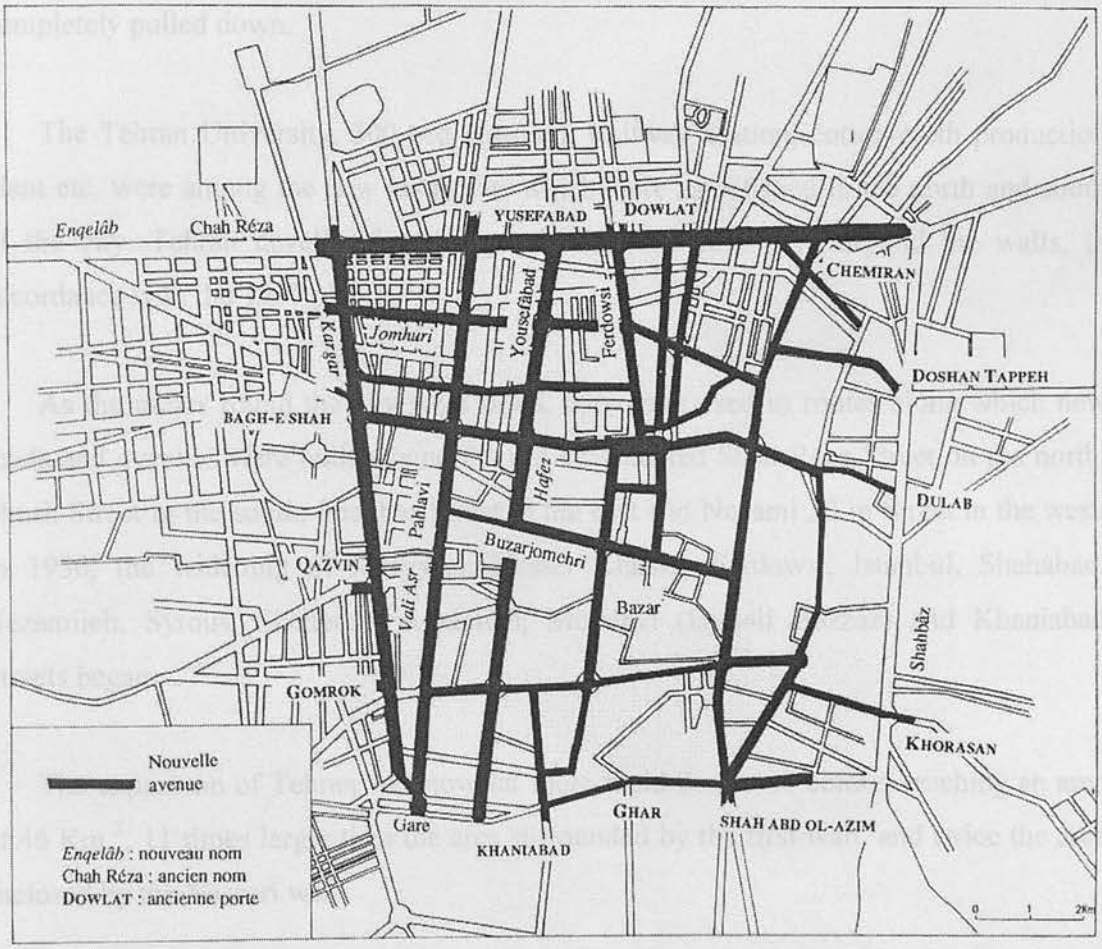


Figure 4-6 Penetration of New Avenue in Tehran (1937) in the East and South of the Sites that are not Built-up yet. According to Tehran's Plan in 1939.
Source: Hourcade, B. and Adle, C. (1992), P.203

In accordance with this Plan, the new city functions were housed in the old nucleus of the city. Furthermore, all the old buildings were completely pulled down and were replaced with new administrative buildings such as the Justice Administration and the

Ministry of Finance and Taxation. The only buildings that were left almost intact were those of Golestan and Shams-ol-Emareh palaces.

The two streets named by Reza Khan and his administration as Khayyam and Buzarjomehr acquired their ultimate shapes. The neighbourhood of Sangalaj was completely pulled down.

The Tehran University, 500-bed Hospital, Railway Station, cotton-cloth production plant etc. were among the new land uses, which were established in the north and south of the city. Tehran developed and expanded for the first time beyond the walls, in accordance with the 1937 plan.

As the moats round the city were filled, they were used as routes along which new roads and avenues were built around the old city, named Shah Reza Street on the north, Shush Street in the south, Shahbaz Street in the east and Nezami 30-m Street in the west. In 1930, the widening of Khayyam, Nasser Khosro, Ferdowsi, Istanbul, Shahabad, Nezamiieh, Syrous, Shahpour, Amaniieh, Mowlavi (Esmail Bazzaz) and Khaniabad Streets began.

The expansion of Tehran was now far more rapid than ever before, reaching an area of 46 Km.^{2}, 11 times larger than the area surrounded by the first wall, and twice the area enclosed by the Nasseri wall.

The construction of the railway station, a number of hospitals and many factories necessitated that some of the north-south axes in the southwest of the city be predominantly at the service of the new land uses. These axes became instruments of growth and expansion in the southwest.

In the northwest, the creation of Tehran University, a number of hospitals etc. encouraged growth. Also, in the north of the city, expansion was primarily along the

roads running from the city to Shemiran, north of the city, namely the so-called old Shemiran Road and Pahlavi Avenue. In the central parts of northern Tehran, because of the undulations and the hilly nature of the area, no expansion had occurred yet.

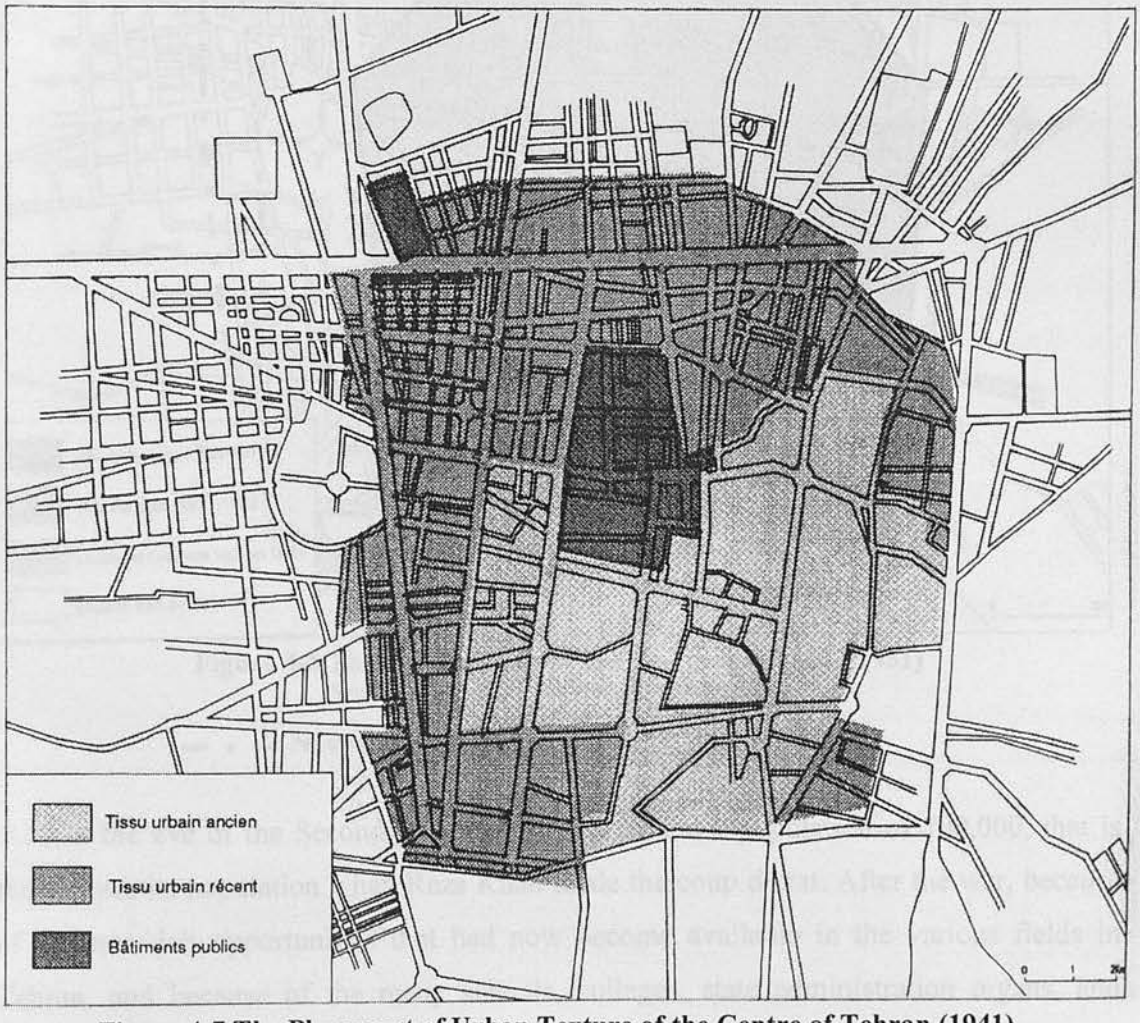


Figure 4-7 The Placement of Urban Texture of the Centre of Tehran (1941)
Source: Hourcade, B. and Adle, C. (1992), P204

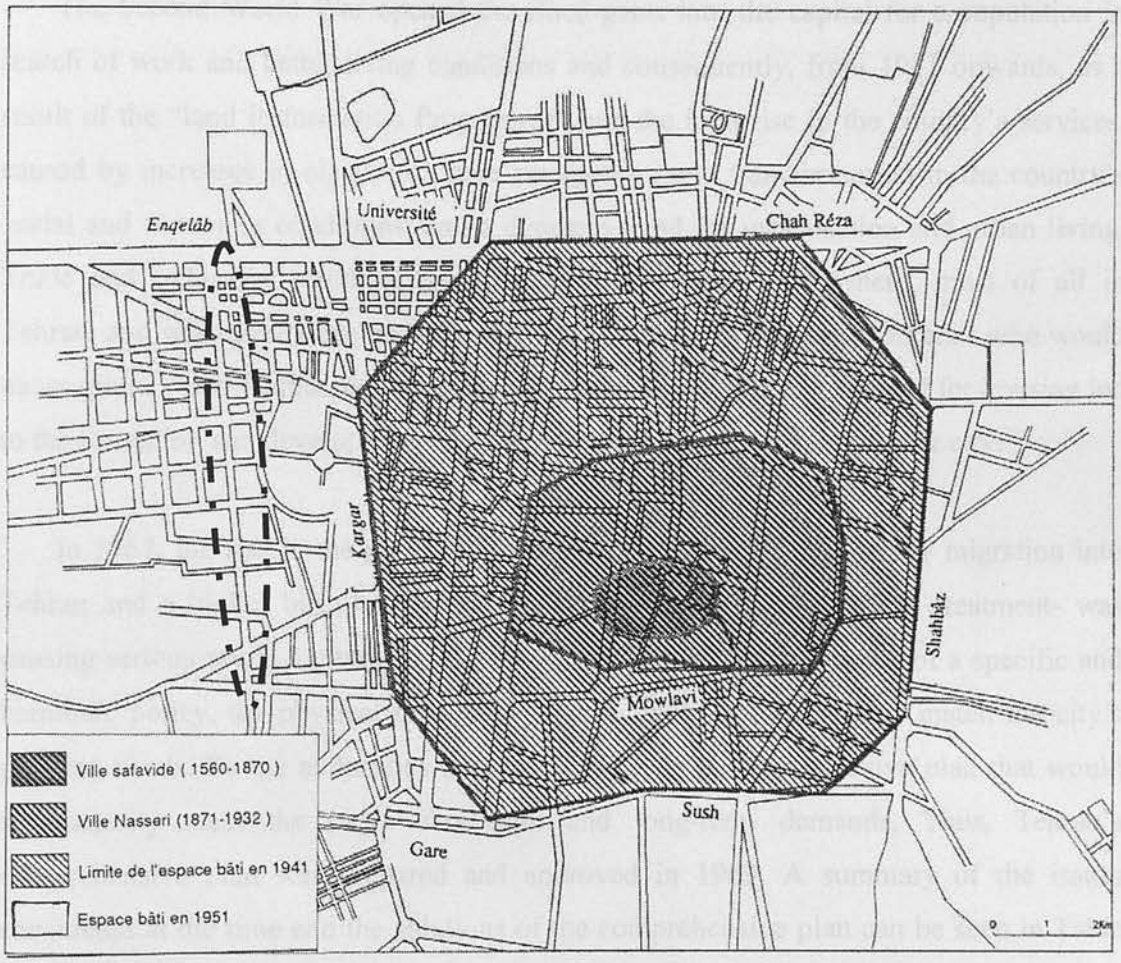


Figure 4-8 The Development of Tehran (period:1560 - 1951)
Source: Hourcade, B. and Adle, C. (1992), P.201

— · — Navvab Project Area

On the eve of the Second World War, Tehran had a population of 700,000, that is three times its population when Reza Khan made the coup d'etat. After the war, because of the new job opportunities that had now become available in the various fields in Tehran, and because of the many schools, colleges, state administration organs, and factories that had been created, Tehran had become firmly established as the centre of administration, trade and industry of Iran. Conditions were just right to attract migrants, and as the city become congested, the wealthier strata of the nation developed new residential areas/suburbs, around the city, particularly to its north.

The Second World War opened the flood-gates into the capital for a population in search of work and better living conditions and consequently, from 1961 onwards, as a result of the "land Reformation Programme" and the high rise in the country's services, caused by increases in oil prices, there emerged a rapid transformation in the country's social and economic conditions, and a dynamic trend for urbanisation and urban living. Trade and industrial activities expanded and intensified everywhere, most of all in Tehran, and with these developments, the rate of arrival of migrant workers - who would never return - also increased. These people needed living space. The need for housing led to the formation and development of new residential quarters all around the city.

In 1967, the rise in the population growth - the result of both heavy migration into Tehran and a higher birth rate owing to far better health and medical treatment- was causing serious social, cultural and structural problems. In the absence of a specific and harmonic policy, the physical growth of the city could not adequately match the city's growing needs. So the authorities decided to draw up a comprehensive plan that would satisfactorily meet the city's short-term and long-term demands. Thus, Tehran's comprehensive plan was prepared and approved in 1969. A summary of the issues considered at the time end the solutions of the comprehensive plan can be seen in Table 4-1.

Table 4-1 Survey of First Comprehensive Plan of Tehran and Measuring its degree of Success in City Problem-Solving
Source: The author, 2005

Comparison Criterion	Measurement Indicators			
	Matrix	**Environmental**	**Population-Social-Economic**	**Managerial**
The existing problems 1965	- Un-programmed urban growth - Intensive activities' density in the centre -The lack of urban services compared to the population -The interference of service and connecting axis -The deficiency of public transportation means -The lack of main and important road network -The lack of pavements	- The limitation of development towards Alborz slopes and proper lands for agriculture	-The imbalance between urban population and urban services -Employment concentration in The city centre -The lack of local employment - High level of unemployment -Housing problems, quantitatively and qualitatively	-The lack of a strong executive organisation

Table 4-1 Survey of First Comprehensive Plan of Tehran and Measuring its degree of Success in City Problem-Solving
Source: The author, 2005

Comparison Criterion	Measurement Indicators			
	Matrix	**Environmental**	**Population-Social-Economic**	**Managerial**
The Proposed solutions 1968	-Creating traffic network in the regions and areas -The linear expansion in east-west line -Determining the 5 and 25 year limits in an area of 751 sq Km. -Creating urban service nucleus -Abbasabad Development Project (Pahlavi Palace) -Establishing sport and recreation centre in the west -Creating terminals, groceries and fruits and vegetable fields -Establishing highway network and suburban in the city -Pavement access to local service areas	-Restoring developing lands -Allocating three class of spaces: green and open, regional, and local spaces -Protecting mountain slope regions	-Indicating the population limit of 5.5 million for the year 1991 -Transferring the industries to the areas in the radius of 120 Km around Tehran -Decentralisation of activities in Tehran	-Establishing the Renovation Organisation in Tehran for urban Development and Construction
The remained difficulties 1990	-Districts' population and service imbalance -City expansion in north and south areas -The Abbasabad Plan is not accomplished -Unformed regions' service nucleus -incompletion of suburban and highway network projects -Non-establishment of hierarchy of roads, network	-Air pollution -Disappearing the mountain slopes, agricultural lands and the gardens -Garbage gathering and transferring -Lack of urban sewage network -Surface water disposal	-Extended migration to Tehran -Population rush to the country -Government and Municipality's disability in executing city construction projects -The problem of housing	-Non qualified management organisation in city administration -Laws and regulations in directing and controlling the city development

Continued

To implement the plan's transportation objectives, Tehran Municipality invited a French consultancy firm in 1971, Sofretu Co., to review the existing state of transport and traffic in Tehran. In 1979, this consultancy firm submitted its findings and proposals. In

the Sofretu scheme, the main emphases were both on making traffic rings around the central nucleus of Tehran and also the major city-centre axes (Figure 4-9).

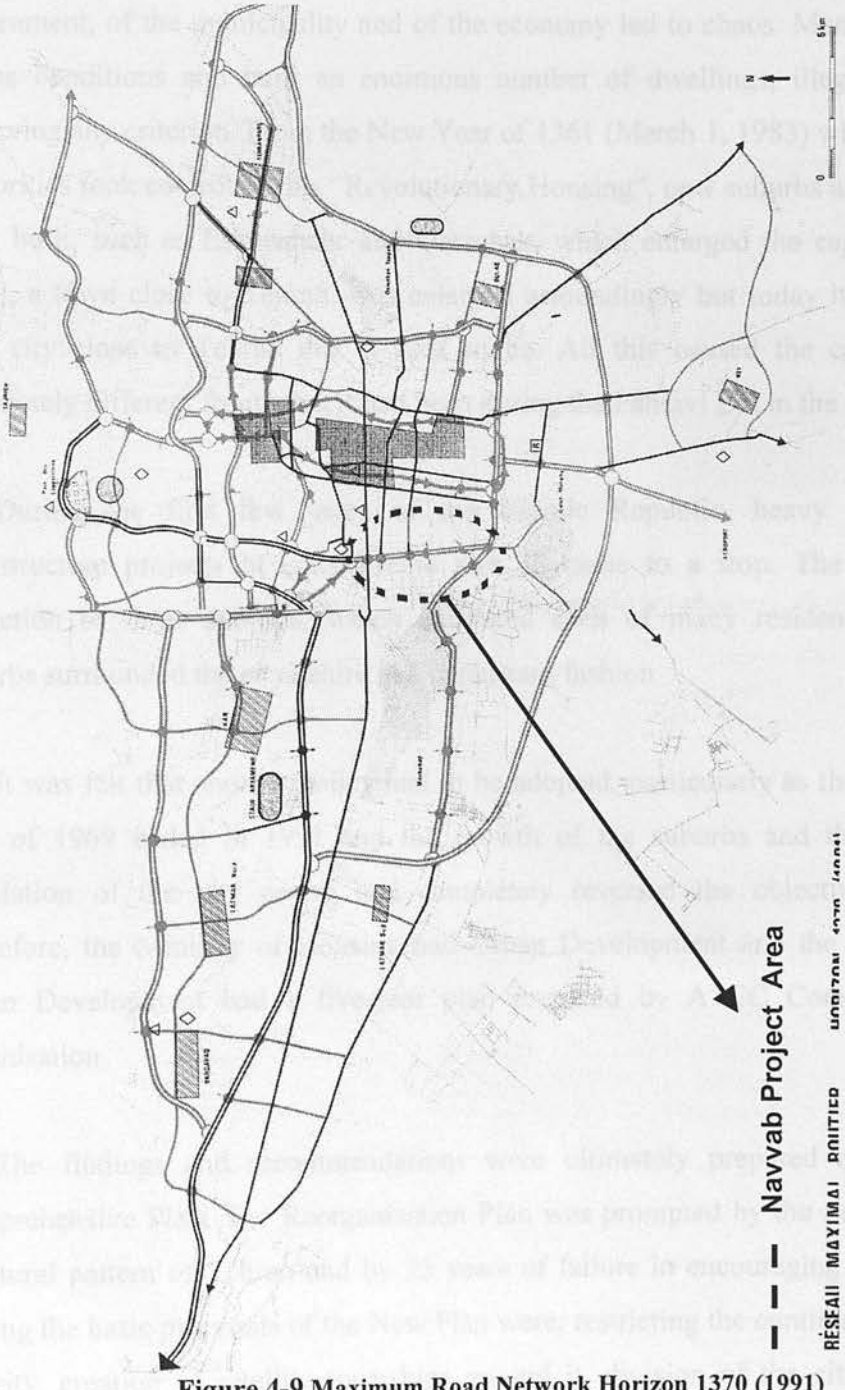


Figure 4-9 Maximum Road Network Horizon 1370 (1991)
Source: Sofertu, Co. (1974), Map.11

In 1979, after two centuries of conflicts and struggles, the people of Tehran took over the control of the city that they had lost. Enormous demonstrations against the monarchy allowed the several million inhabitants of Tehran to take over the city. The collapse of the government, of the municipality and of the economy led to chaos. Many took advantage of the conditions and built an enormous number of dwellings, illegally and without observing any criterion. From the New Year of 1361 (March 1, 1983) when the municipal authorities took control of this "Revolutionary Housing", new suburbs and satellite towns were built, such as Eslamshahr and Qarachak, which enlarged the capital enormously. Karaj, a town close to Tehran, was enlarged astoundingly but today it is no longer the only city close to Tehran that it used to be. All this caused the capital to become completely different from what it had been during the Pahlavi Era in the 1970s.

During the first few years of the Islamic Republic, heavy investments and infrastructure projects of considerable size all came to a stop. The city turned into collection of large suburbs, which consisted each of many residential units. These suburbs surrounded the city centre in a haphazard fashion.

It was felt that another policy had to be adopted, particularly as the Comprehensive Plan of 1969 ended in 1991 and the growth of the suburbs and the decline in the population of the city centre had completely reversed the objectives of the Plan. Therefore, the Ministry of Housing had Urban Development and the High Council of Urban Development had a five-year plan prepared by ATEC Consultant Engineers Organisation.

The findings and recommendations were ultimately prepared as Tehran's new Comprehensive Plan. The Reorganisation Plan was prompted by the need to review the structural pattern of Tehran and by 23 years of failure in encouraging a lateral growth. Among the basic proposals of the New Plan were: restricting the continuous expansion of the city, creation of satellite townships around it, division of the city into five main

districts, creation of many nuclei as city centres, dealing with Tehran and Karaj as "twin" cities alongside one another etc.

In table 4-2, a summary of the challenges that were faced by the Second Comprehensive Plan and also the solutions proposed are listed.

Table 4-2 Surveying Second Comprehensive Plan of Tehran and Measuring their amount of Success in Solving City Problems
Source: The author, 2005

Comparison Criterion	Measurement Indicators			
	Matrix	**Environmental**	**Population-Social-Economical**	**Managerial**
The existing problems 1988	-Irregular growth of Tehran and the suburb -Formation of population centres around Tehran - Requirement pressures of the suburbs to the city - Improper distribution of the services in the city - The network's lack of efficiency against increasing personal transportation means	- Living Environment-Pollution (sound, air, water) - garbage gathering and disposal - water deficiency - lack of urban sewage - the problem of surface waters - the pollutions caused by inconsiderate industries	- Concentration of migrate population in the suburbs - Population escaping from Tehran central and old areas - Fundamentally, investment stops in the city	- stating the policy of capital city transference
The Proposed solutions 1991	-Limiting city continuous development - Establishing new cities - Multi-nucleus city formation - Paying attention to the historical Tehran - Presenting operational sequences - Creating big machines parking - Registering and completion of traffic network of the First Comprehensive Plan - Areas connection through the highways - Establishing Tehran expressway	- Allocating military lands to the green space - Developing Tehran green boundary for gardens and agricultural Lands, preservation - Creating urban sewage network - Completion of surface waters, disposal network - Annoying industries transfer and avoiding from land expansion	- Executing the plans of population limitation up to 7.8 million - War migratory returning - Strengthening new centres for activities absorption	- Establishing Tehran City Management Council - Executing the policy of non-concentration in the Municipality - The municipality is the executer of Comprehensive Plan and the approvals of higher counci and Article 5 council - Dividing the city to 5 areas and 22 districts

Table 4-2 Surveying Second Comprehensive Plan of Tehran and Measuring their amount of Success in Solving City Problems

Source: The author, 2005

Comparison Criterion	Measurement Indicators *Continued*			
	Matrix	**Environmental**	**Population-Social-Economical**	**Managerial**
The remained difficulties 1995	- Expansion of the city in the surroundings - Growth continuation of the edges - Non-formation of 5 areas - The deficiency of urban services - The deficiency of the city traffic network with a low capacity	- Dangerous Increase in air pollution - Intensive deficiency of green and open spaces - Appearing of Sound pollution etc. - Non-action on urban sewage	- Although the population in Tehran became fixed, growth continued -The increase in Land and house prices - Country capital concentration in Tehran -The Municipality is not able to continue the execution of plans - Housing deficiency	- The management of Tehran city council is not activated -Lack of co-ordination in the effective organisations in urban development - Old rules and regulations

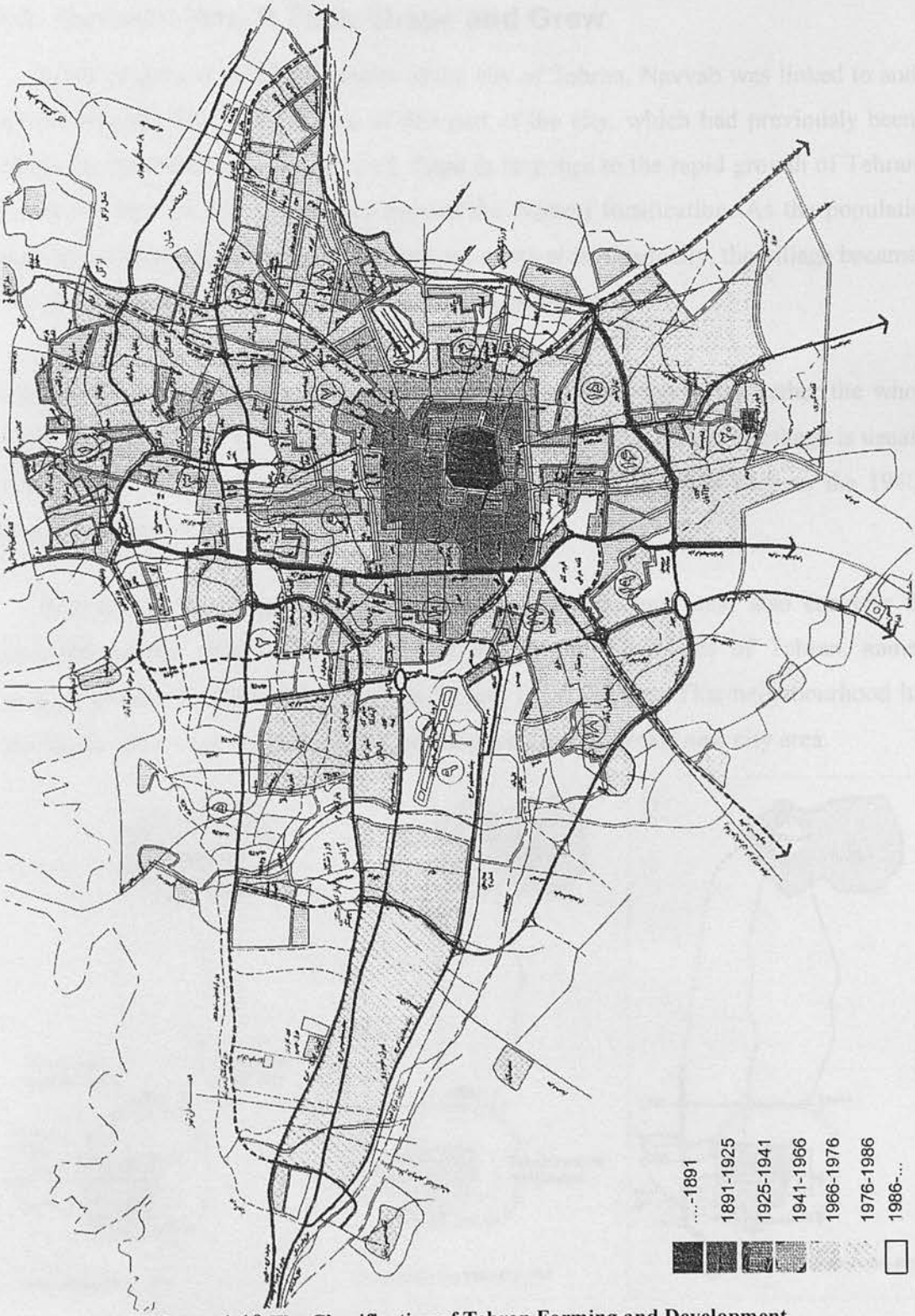


Figure 4-10 The Classification of Tehran Forming and Development
Source: BACEC (1997), Map.9

4.3 Navvab: How It Took Shape and Grew

In the process of the development of the city of Tehran, Navvab was linked to and a part of the city. The main nucleus of this part of the city, which had previously been a village by the name of Baryanak, took shape in response to the rapid growth of Tehran's population and the city's expansion beyond the Nasseri fortification. As the population grew, it forced the south of the city to expand westwards. Gradually, the village became a part of the city, absorbed into it as one of its neighbourhoods.

It did not join the city merely as a piece of land, an open space, but rather the whole village became linked to the city, with all the consequences that such a linkage is usually accompanied by. The first maps that confirm this absorption, date back to the 1940s, some 60 year ago (Figure 4-11).

In studying this linkage of a rural area to the city, one must also consider the proximity of the village with one of the oldest neighbourhoods of Tehran, namely Sangalaj (Figure 4-12), today's Districts 11 and 12 of the city. This neighbourhood had remarkable effects on the physical and social development of this new city area.

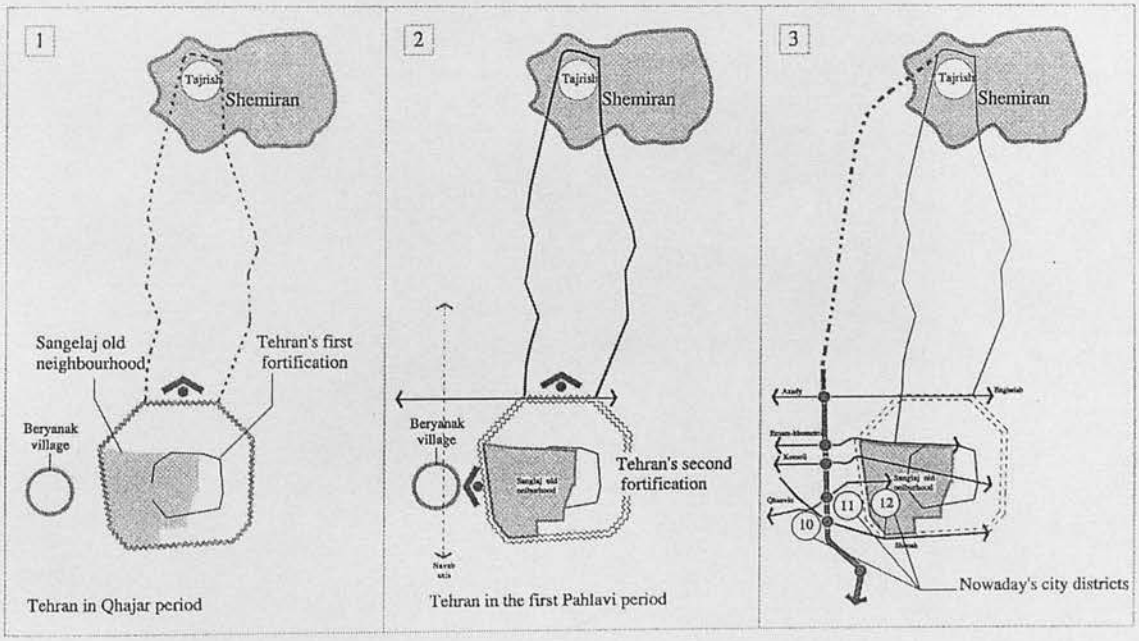


Figure 4-11 Development of Tehran and Creating the Navvab Axis
Source: The author, 2005

Figure 4-12 Tehran and Environs in 900

Source: Bahrambeygui, H. (1997), p.30.

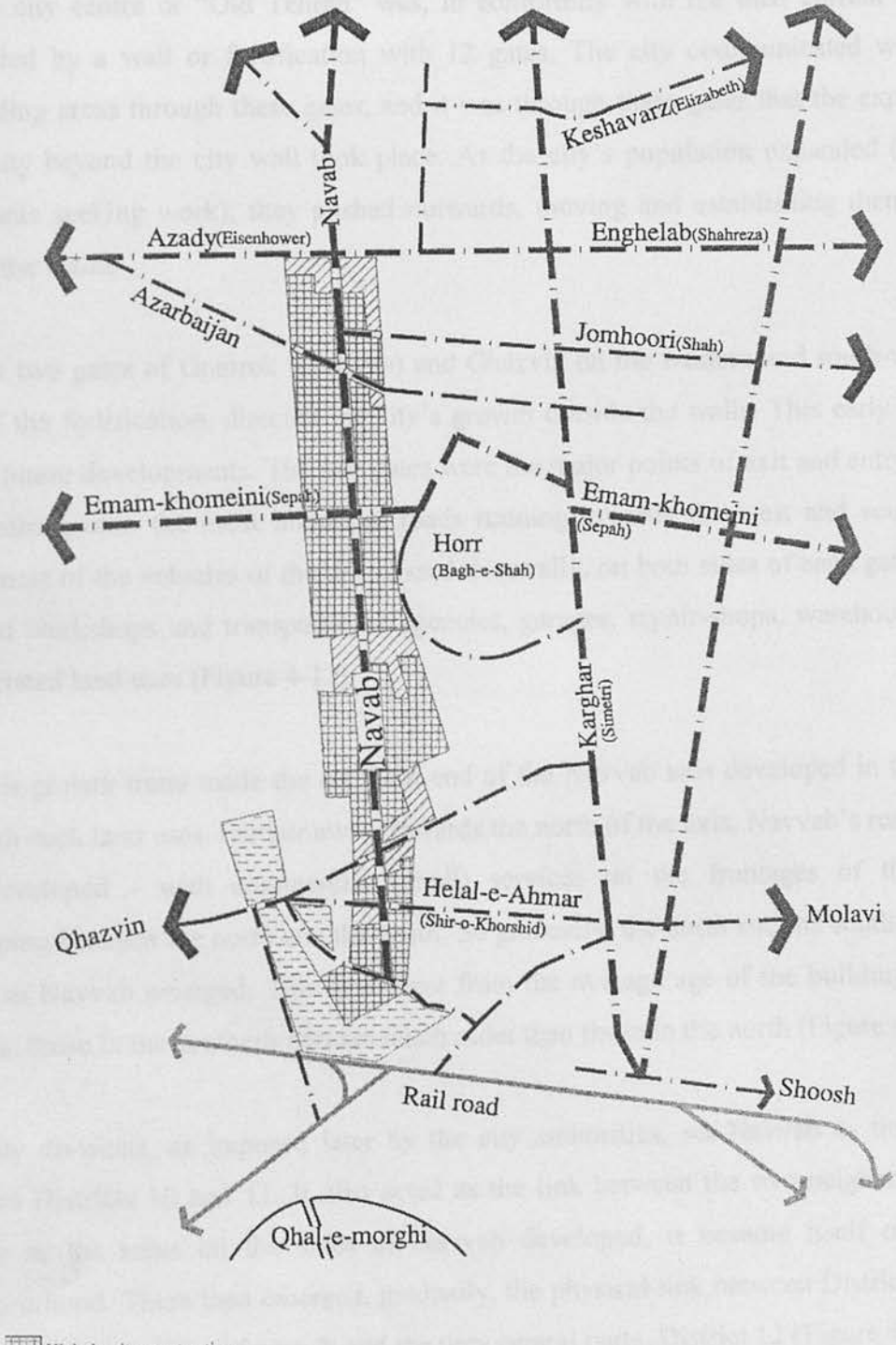


Figure 4-13 Formation and Density of Building around the Navvab Axis
Source: Aerial Photography of Navvab Area, 1956

The city centre or "Old Tehran" was, in conformity with the then current trends, surrounded by a wall or fortification with 12 gates. The city communicated with the surrounding areas through these gates, and it was through these gates that the expansion of the city beyond the city wall took place. As the city's population expanded (mostly immigrants seeking work), they pushed outwards, moving and establishing themselves beyond the walls.

The two gates of Gomrok (customs) and Ghazvin on the western and south-western sides of the fortification, directed the city's growth outside the walls. This early growth shaped future developments. The two gates were the major points of exit and entry of the city, opening onto the most important roads running towards the west and southwest, where most of the vehicles of the day passed. Naturally, on both sides of each gate, there emerged workshops and transportation agencies, garages, repair-shops, warehouses and other related land uses (Figure 4-13).

This growth trend made the southern end of the Navvab axis developed in this way and with such land uses. Further away, towards the north of the axis, Navvab's residential area developed - with commercial (retail) services on the frontages of the axis, developing between the north and the south. So gradually, the north and the south became linked as Navvab emerged. This is evident from the average age of the buildings along the axis: those in the southern part are much older than those in the north (Figure 4-14).

City divisions, as imposed later by the city authorities, set Navvab as the border between Districts 10 and 11. It also acted as the link between the two neighbourhoods and so as the areas on the sides of Navvab developed, it became itself one large neighbourhood. There then emerged, gradually, the physical link between District 11 and the city's oldest nucleus of growth and the very central parts, District 12 (Figure 4-12).

Figure 4-14/1 Examples of Building Density and Building Quality on the Main Streets in the Old Context of Navvab District (northern part of Navvab- middle section of Navvab)
Source: The author, 2005

Figure 4-14/2 Examples of Building Density and Building Quality on the Main Streets in the Old Context of Navvab District (northern part of Navvab- middle section of Navvab)
Source: The author, 2005

In the years following 1941, the development of this area continued gradually and Navvab emerged as a main street between two major evolving neighbourhoods. From 1961 onwards, these developments accelerated as the population grew more rapidly. Eventually, the area acquired a compact and densely developed texture. This trend was later reflected in Tehran's Comprehensive Plan[2] which recommended westward expansion, as it found these areas more capable of accepting a large part of the population growth.

During 1941-71, as the city grew, spreading to the areas surrounding it, the new neighbourhoods that emerged within it were led to communicate with the older neighbourhoods. Navvab too, underwent some, though limited changes, to fit in its part of the city, establish its linkage and relations with the surrounding areas, and allow these, to form linkages and relations.

The changes that occurred in the scale and pattern of Navvab as a result of further development, naturally affected the role of this axis (Navvab Street). Earlier it acted on a smaller scale but eventually on a much larger one. Indeed, it was destined to act as a major city artery, as can be seen in the later plans (Figure 4-15).

As often happens in the third world - as a result of official and legal delays and formalities, and delays in meeting organic demands - development followed circumstances and evolutions, only passively limiting, not eradicating, the corrosive effects. In the absence of criteria and guidelines for the city's development, this area of the city grew with the population, simply following circumstances. First, workshops and warehouses, which usually emerge on the outskirts of cities, appeared at some distance from the residential quarters. Eventually, the space between the old neighbourhoods and the workshops and warehouses became built up. Naturally, land use varied: closer to the older parts, the built-up area was predominantly residential and as the distance from the

[2] Ratified, 1969

residential area increased towards the workshops and warehouses, there were more buildings, fit for trade, commerce and workshops. This was a continuous trend: areas were built up here and there close to the city and eventually joined it and became a part of it.

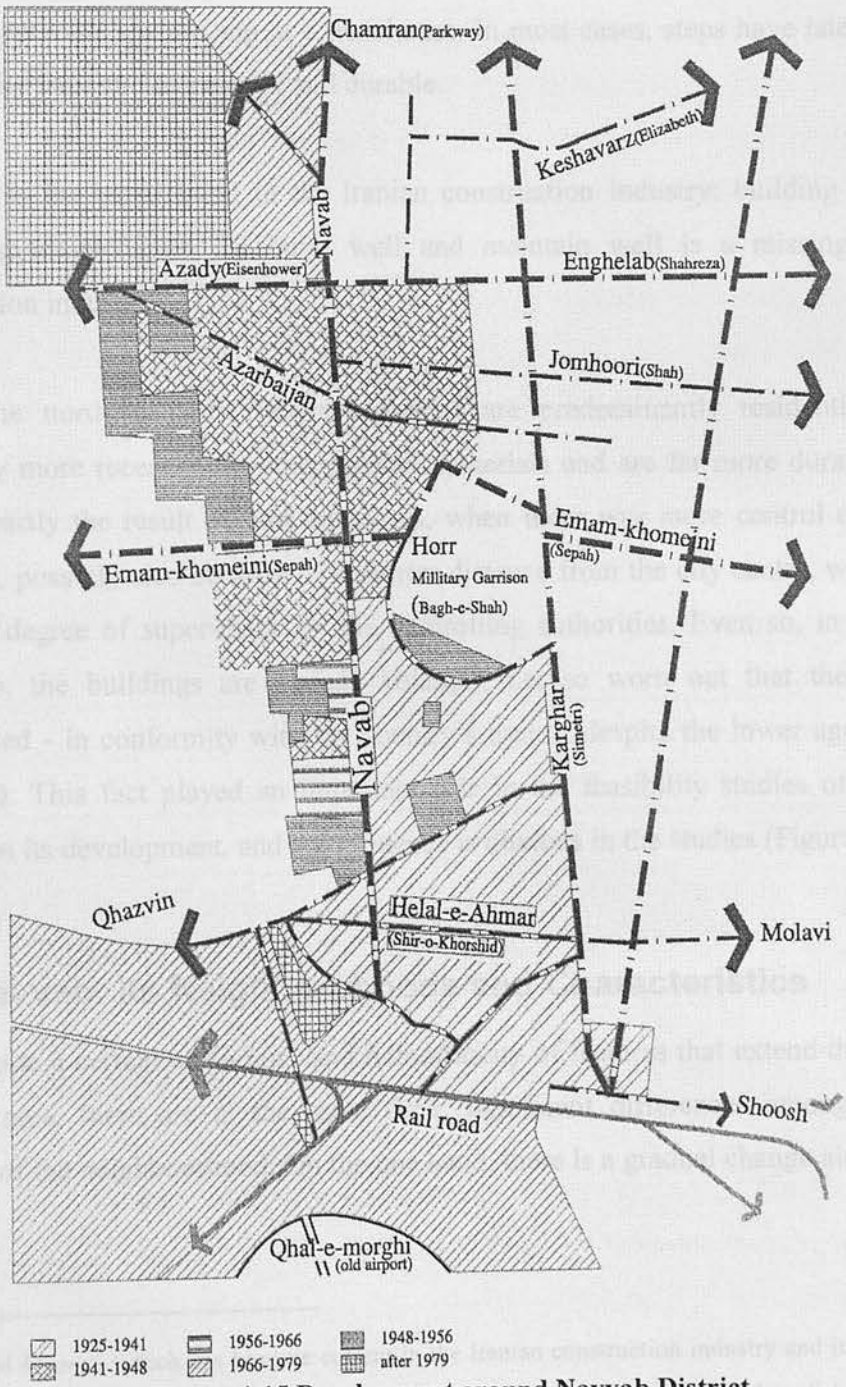


Figure 4-15 Development around Navvab District
Source: The author, 2005

This trend is clearly visible in the 60-year history of Navvab: the type of building, the nature of the building materials used, and the styles of the constructions are clearly inferior. Also, the buildings are older in the southern parts of Navvab where the buildings are mostly of a light, temporary nature, mainly sheds and light structures rapidly put up to provide space for a workshop or a warehouse. In most cases, steps have later been taken to make the structure more solid and durable.

This is the usual trend in the Iranian construction industry: building cheaply and neglecting maintenance. To build well and maintain well is a missing link in its construction industry.

In the northern parts, where buildings are predominantly residential, they are obviously more recent, built with superior materials and are far more durable and safe. This is partly the result of later buildings, when there was more control over building activities, possibly also because of a shorter distance from the city centre, which allowed a higher degree of supervision by the controlling authorities. Even so, in the northern parts too, the buildings are already kolangi[3], i.e. so worn out that they should be demolished - in conformity with the country's trends, despite the lower age (average of 40 years). This fact played an important role in the feasibility studies of the Navvab Project on its development, and the influence is obvious in the studies (Figure 4-14).

4.4 Navvab: Its Neighbourhoods and Characteristics

Despite a certain uniformity and homogeneity of features that extend throughout the Navvab area, there are at the same time, significant differences among the various sections of the neighbourhood. On the one hand, there is a gradual change along its length

[3] The word *kolangi*, which has become current in the Iranian construction industry and its jargon, comes from the word *kolang* (the pick). It means a building whose value lies in its being demolished.

from south to north and, on the other, the two areas to its sides, District 10 on the east and 11 on the west, are quite distinct from each other.

One uniform characteristic of the entire neighbourhood is the higher than average rate of population, i.e. the relative congestion. According to statistics, which are available from 1986, i.e. the times before the Navvab Project was begun, population density in Tehran, at the time, was 66 people per hectare, while in districts 10 and 11 it was 398 and 211 respectively, both much higher than the then average for Tehran.

Such high population densities naturally mean that the per capita share of space, residential area, availability of services and access space are lower. For example, in Districts 10 and 11, living space per capita was 11 m^2 and 18 m^2 while the average for Tehran was 29 m^2. The same difference can be seen in access space per capita and services (Table 4-3).

Table 4-3 The Population, Areas and Per Capita of Major Application in Regional Level and Above
(Tenth and Eleventh urban areas, 1986, hectar/m^2)
Source: The author, 2005

District	Population	Extent	Residential		Services		Routes	
			Area	Per head	Area	Per head	Area	Per head
10	311404	783	339.4	10.9	374.67	12.03	235.5	7.56
11	256174	1211	474.16	18.51	493.17	19.25	248.09	9.68
total	567578	1994	813.56	14.33	867.84	15.29	483.59	8.52
Tehran	4258400	64882	17758.74	29.7	20667.31	48.53	6305.92	14.81

A review of the conditions prevalent in the Navvab region, on the two sides of the axis, and their comparison with the city-wide conditions reveals that the area is mainly residential. About 43% and 39% (on the two sides of the axis) of the available space are used for residential purposes, compared to the average of 29% for the whole city (Table 4-3).

Table 4-4 Construction Density (Net under Foundation) (Tenth and eleventh urban areas, 1986)
Source: The author, 2005

Density / District	The average of under structure for places of residence (m^2)	The average of lands for places of residence (percentage)	The average residential density (percentage)	The aggregate of residential lands (hectare)	The aggregate under construction (hectare)	The total number of housing
10	108.89	58.55	186	339.4	631.19	57966
11	108.41	82.12	124	474.2	590.05	54428
Tehran	101.99	136.3	75	15855.63	11864.17	1163325

Table 4-4 indicates that the average plot of land used for residential purposes is 58 sq. m in District 10 and 87 sq m in District 11, as against the average of 136 sq. m. for Tehran. The small size of plots of land is indeed a significant matter. It means a very high density of buildings, especially when the average floor area per plot of land is considered: 108 sq. m. as against the average of 101 sq. m. for the entire Tehran. Residential density is 186% of the land in District 19, 124% in District 11 and 75% is the average for Tehran.

The western section of Navvab, which has presently become District 10 of Tehran, emerged in continuation of the physical growth of the eastern section (presently District 11) as city growth moved westwards. This gradual change and step-by-step growth caused District 10 to be different from the older District 11, each on one side of the axis.

The potential of the two sections is not equal: the land use in one is at city scale (District 10) and in the other at regional-local (District 11). This can also be inferred from the difference in the price and leasehold value of land on the two sides, which is higher in District 10 than District 11. This perhaps results from the fact that District 11 enjoys the advantage of being closer to the central parts of the city, especially to the central business districts. Furthermore, land uses in District 11 go to city level functions and in District 10 to regional level functions (Tables 4-5 and 4-6).

District	Land uses	Commercial	Educational	Higher Education	Cultural	Religious	Entertainment	Remedial	Sport	Administrative	Parkland	Industrial	Urban facility	Transport & roadway	Social Services	Leisure	Total
10	Area	1.8	0	0	0	0.6	0	3.2	0	4.1	0	25.7	0	88.63	0.05	0	**124.08**
	Per head	0.058	0	0	0	0.019	0	0.103	0	0.132	0	0.825	0	2.846	0.002	0	**3.985**
11	Area	5.19	1.4	16.9	0.51	1	0.7	15.58	1.52	11.9	3.2	11.5	0	109.2	0.12	5.2	**183.92**
	Per head	0.203	0.054	0.66	0.02	0.039	0.027	0.608	0.059	0.465	0.125	0.449	0	4.263	0.005	0.203	**7.179**
Total	Area	6.99	1.4	16.9	0.51	1.6	0.7	18.78	1.52	16	3.2	37.2	0	197.83	0.17	5.2	**308**
	Per head	0.123	0.027	0.298	0.009	0.028	0.012	0.331	0.027	0.282	0.056	0.655	0	3.485	0.003	0.092	**5.426**
Tehran	Area	333.17	7.9	817.77	256.11	73.7	73.7	310.67	691	474.6	3904.14	3931.6	208.2	4585.39	2.71	101.49	**15826.05**
	Per head	0.55	0.01	1.49	0.42	0.12	0.12	0.51	1.13	0.79	4.93	6.45	0.34	7.52	0.004	0.17	**37.164**

Table 4-5 Land Uses in District Class in the Tenth and Eleventh Urban Areas (1986)
Source: The author, 2005

District	Land uses	Commercial	Educational	Higher Education	Cultural	Religious	Entertainment	Remedial	Sport	Administrative	Parkland	Industrial	Urban facility	Transport & roadway	Social Services	Leisure	Total
10	Area	7.25	0.19	0	0	0.46	0.37	0	0	2.17	0	13.07	47.74	26.89	0.06	0	**98.2**
	Per head	0.23	0.006	0	0	0.015	0.012	0	0	0.07	0	0.42	1.533	0.863	0.002	0	**3.153**
11	Area	11.83	0.25	1.46	0.13	0.55	0.77	0	0	3.26	0	23.53	74.8	41.54	0.18	0	**158.3**
	Per head	0.462	0.01	0.057	0.005	0.215	0.03	0	0	0.127	0	0.919	2.92	1.622	0.007	0	**6.179**
Total	Area	19.08	0.44	1.46	0.13	1.01	1.14	0	0	5.43	0	36.6	122.54	68.43	0.24	0	**256.5**
	Per head	0.448	0.01	0.034	0.003	0.024	0.027	0	0	0.128	0	0.86	2.882	1.61	0.005	0	**6.033**
Tehran	Area	166.05	3.26	37.34	10.4	11.29	8.19	9.06	18.78	56.63	142.7	310.89	1317.14	1481.88	5.09	1.05	**3579.75**
	Per head	0.27	0.01	0.06	0.02	0.02	0.01	0.01	0.03	0.09	0.23	0.51	2.16	2.43	0.1	0.002	**5.87**

Table 4-6 Land Uses in Urban Class and Beyond in the Tenth and Eleventh Urban Areas (1986)
Source: The author, 2005

The edges of the eastern and western sections of the Navvab region, that lie on the axis, i.e. the street frontages, are long chains of commercial and service units (mainly retail) at regional scale. Beyond the frontages lie the residential areas, and beyond that, commercial and services units at a neighbourhood level. At the outer limits, the two sections meet other neighbourhoods. Along the main arteries within the texture, one finds commercial and service units here and there, scattered across the neighbourhood but providing services, naturally, at their own smaller scale.

Trade-service units in its northern parts and industrial units and workshops in the southern parts dominate Navvab access. So, the two parts are different because of access to services the different nature of the economic activities (Figure 4-16).

Figure 4-16 Examples of industrial workshops and Retailers in the south of Navvab Street
Source: The author, 2005

The quality of the buildings improves from south to north and as one move northwards, one finds a larger number of apartment and multi-story buildings, which indicates higher land prices (Figure 4-17).

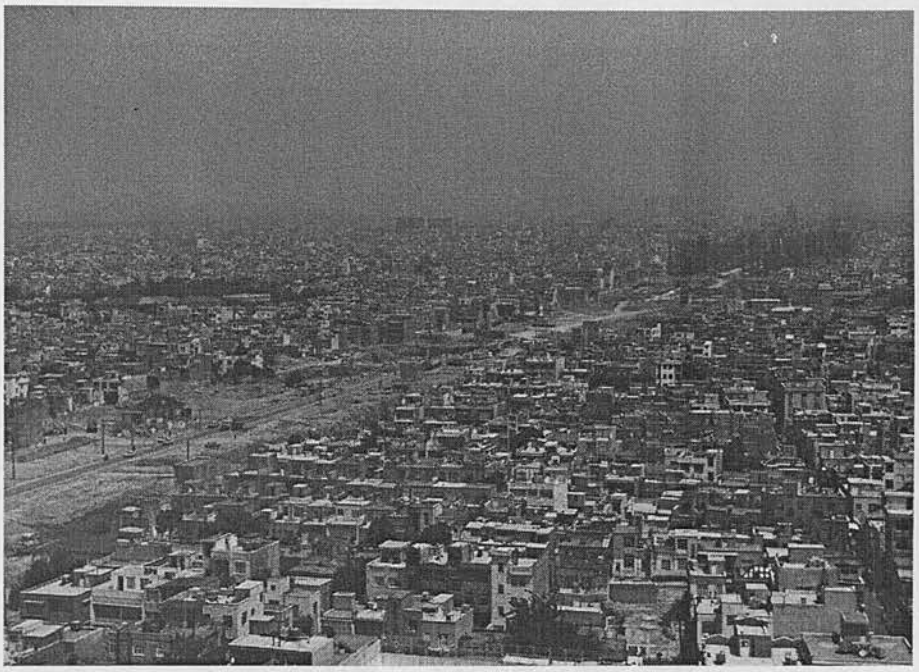


Figure 4-17/1 Quality and Density of Buildings in the North of Navvab Street
Source: Tehran Abadsaz Company- TAC Control Project Centre, Oct.1995

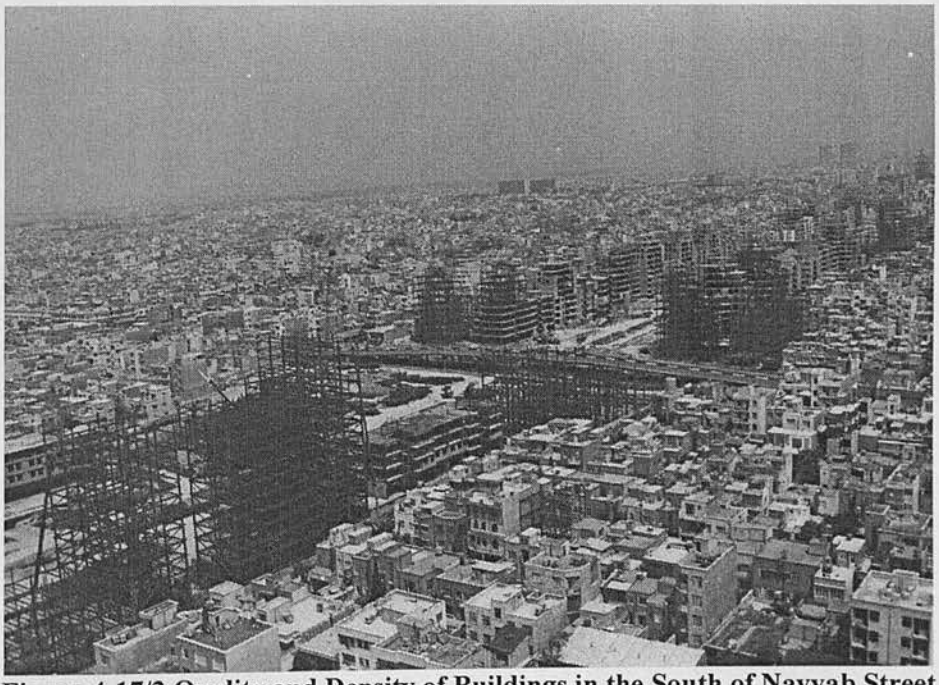


Figure 4-17/2 Quality and Density of Buildings in the South of Navvab Street
Source: TAC Control Project Centre, May.1995

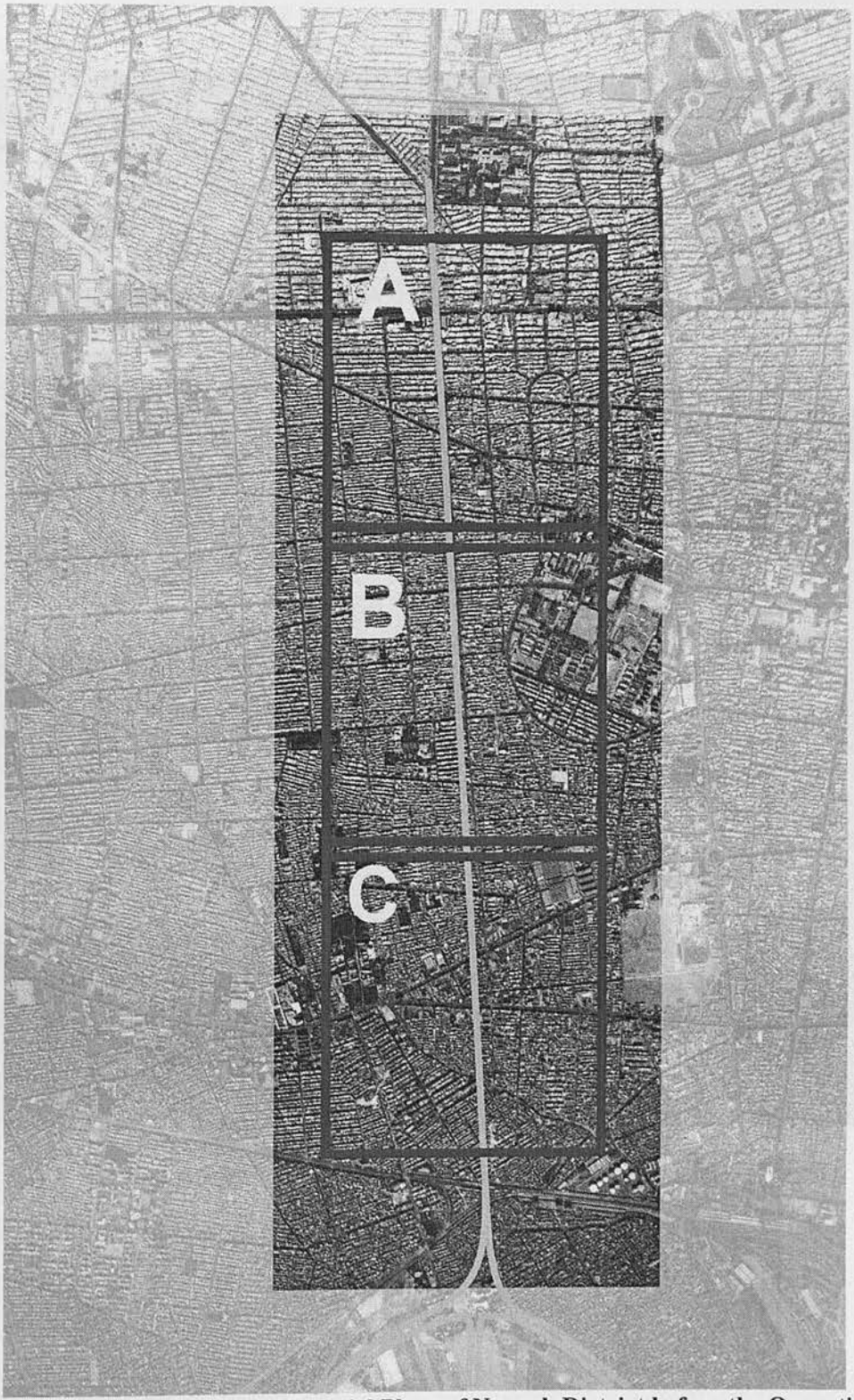


Figure 4-18/1 Indicators of the Aerial Plans of Navvab District before the Operation
Source: N.C.C.I, (1989)

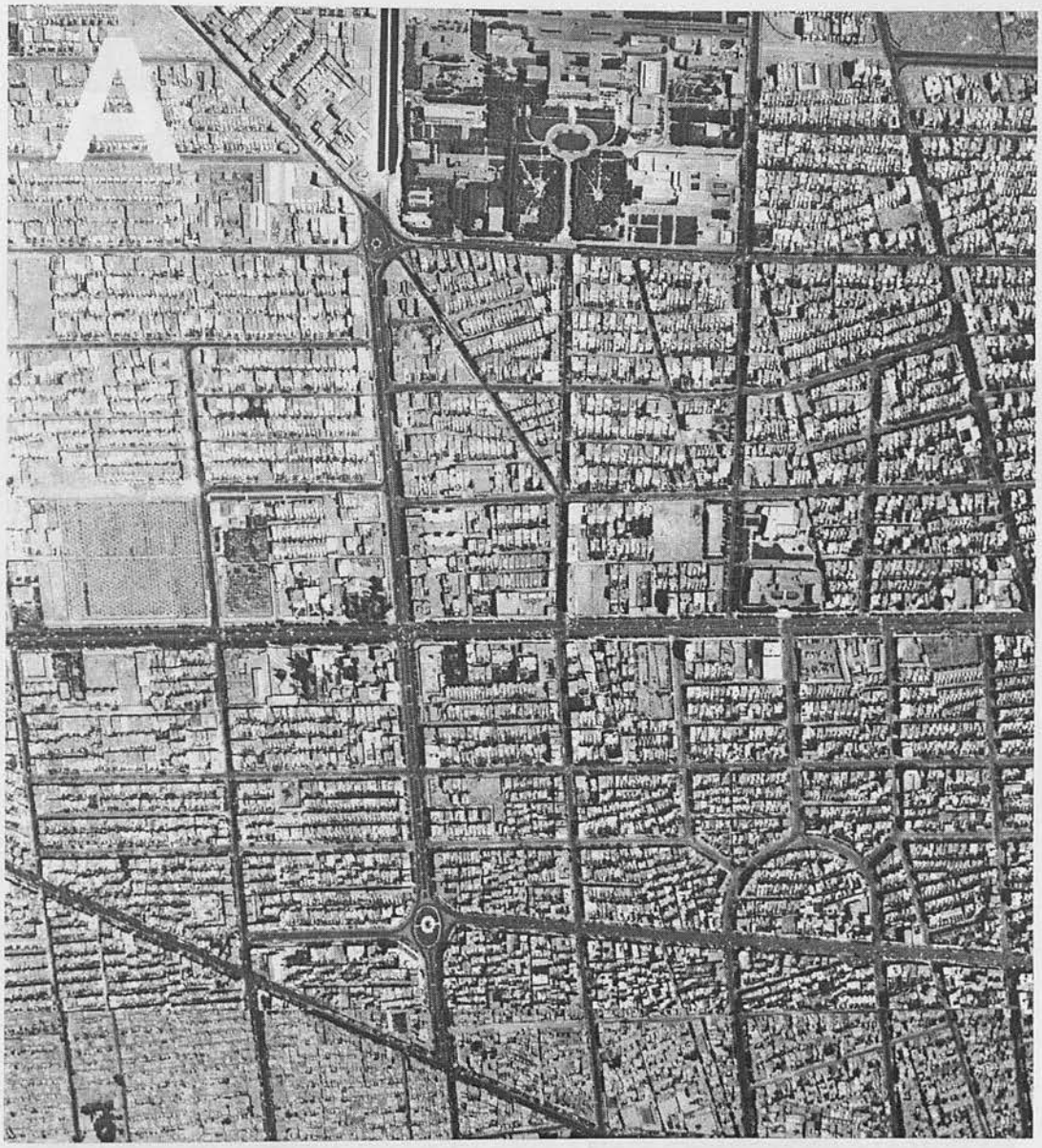


Figure 4-18/2 Aerial Plan of Navvab District the Operation in 1990 (Part A)
Source: N.C.C.I, (1990)

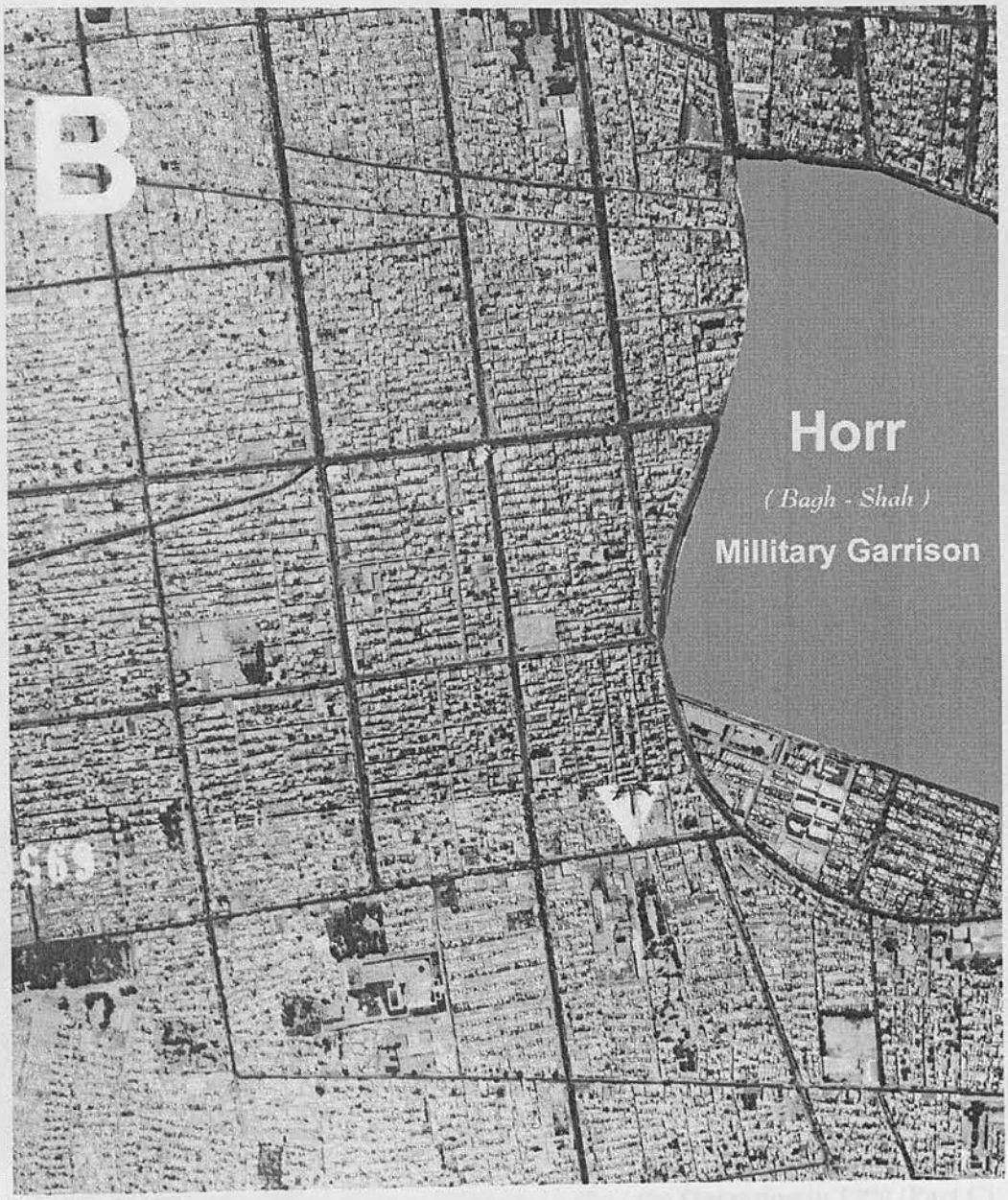


Figure 4-18/3 Aerial Plan of Navvab District before the Operation in 1990 (Part B)
Source: N.C.C.I, (1990)

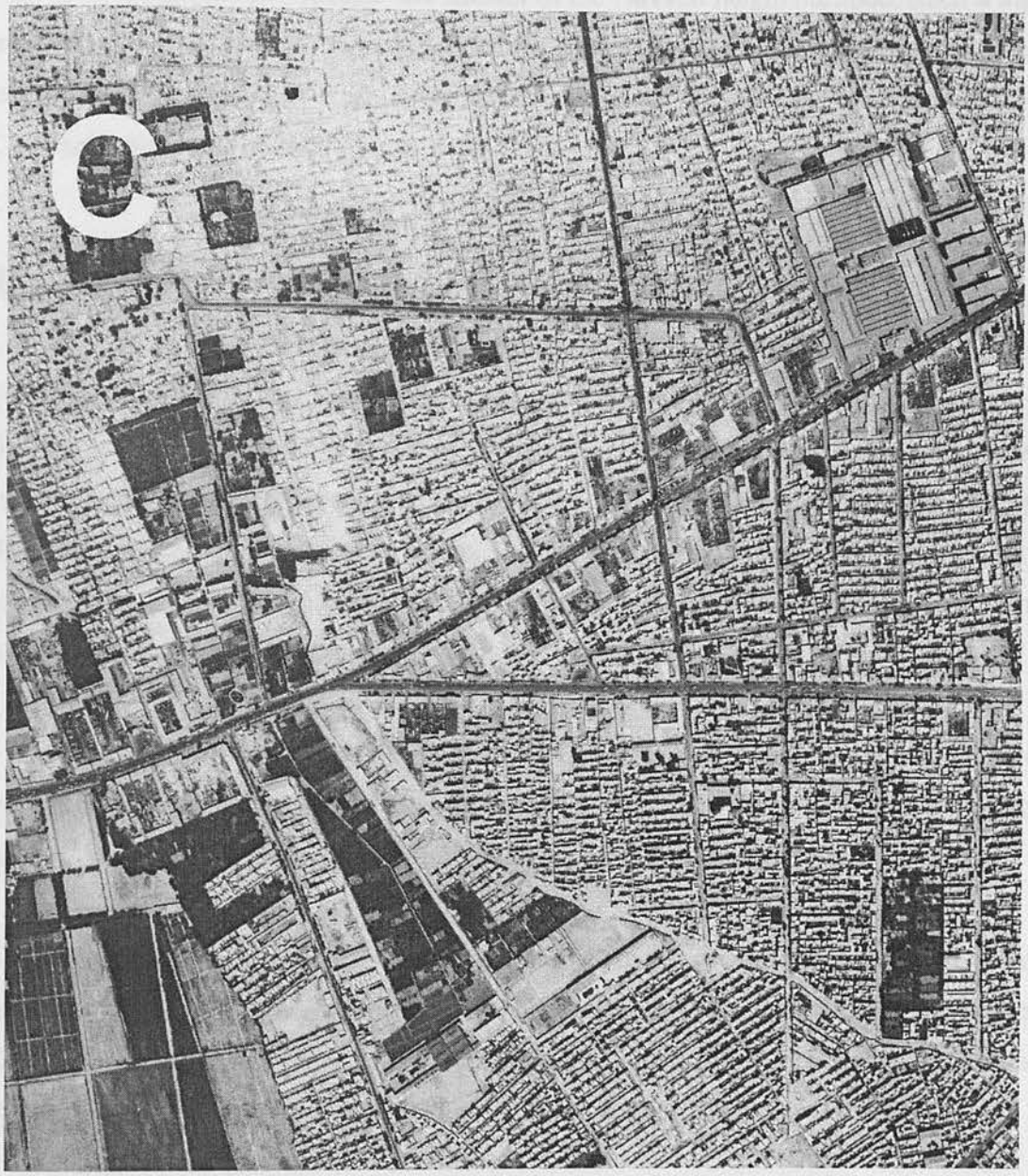


Figure 4-18/4 Aerial Plan of Navvab District before the Operation in 1990 (Part C)
Source: N.C.C.I, (1990)

Although in the northern parts there are many more buildings that are multi-storey, population density is higher in the southern parts. This is the result of the smaller size of land plots and is so serious that in the Robat-e-Karim and Haghshenasan areas, it is as

high as 1,063 people per hectare[4] the densest of the Navvab neighbourhood. Such a high population density and the low quality of the buildings, has made the region an ideal target for reconstruction and development for such plans and attempts as the Comprehensive Plan of 1969 (Figure 4-18).

4.5 Navvab: Its Role in the Access Network

In the late nineteenth century, the Gomrok (Customs) and Ghazvin Gates opened onto roads leading to the western, north-western and south-western parts of the country. Because of prosperous trade and socio-economic relations between Tehran and those regions, many people from those areas travelled to Tehran and the road leading from there to Tehran, often had heavy traffic. Indeed, many people came to Tehran to stay, especially those coming from Azarbaijan, a province from which issued many immigrants to Tehran and elsewhere.

Quite naturally, close to these gates many transport-related land uses emerged along the routes: transport agencies, vehicle repair shops, inns etc. A second phase of development organised the old pattern and reconciled these areas to the rest of the city.

As these routes emerged, the pattern of the surroundings took shape and a network of access ways developed organically around the main routes, naturally linking the area to the neighbouring areas. Thus, Navvab Street gradually took shape, linking the northern to the southern parts of the region where the travel-related land uses were located.

As transport facilities first emerged in the southern parts, these parts of the street are older than and quite different from the northern parts, where trade-service activities were concentrated. The gradual change in land use and the historic sequence caused a

[4] Bavand Consultant Engineers - BACEC' report:"Reconciling Navvab Project with the Surrounding Textyre", 1998-Tehran, p.39

difference to appear in the scale of services and the scale of land use between the two parts (north and south).

When the fortification round Tehran was pulled down during the era of Reza Pahlavi (1926), the city began to expand beyond those, limits westwards, northwards, and southwards. The main south-north arteries were Shahpour, Pahlavi and 30-m Kargar which cut across the major east-west artery, Shahreza Avenue (present-day Enghelab). This road also acted as the main belt in the access network leading to the regions southwest of the city.

From 1941 onwards, Navvab's potential for accepting population growth in the western and south-western parts of the city made the area of great significance. It gradually became more and more important and naturally turned from a local axis that could only serve its own local access ways to an important axis heavily laden with traffic and serving a far vaster region. It had to grow from a network axis to a regional axis, in parts even beyond. Thus, it was quite natural that the first town plan (Tehran's Comprehensive Plans 1968) which aimed to give Tehran a cohesive access-network pattern should pay particular attention to Navvab, in the west of Tehran.

A point that must not be ignored when studying the physical aspects of west Tehran and its access network, is the role that the western parts of Tehran had to play, according to the Comprehensive Plan, in Tehran's future growth. Naturally, this role necessitated that the position, condition and role of each city element be reviewed, in particular the access network. This network was, according to the model envisaged in the plan, to provide the skeleton and structure of future development.

In the section of the plan where recommendations are made with respect to the access and transportation network, the plan has paid particular attention to this "main road" and considered it as a main north-south axis in the west of Tehran (Figure 4-9).

In yet another plan - the Comprehensive City Transportation Plan for Tehran, Sofretu, (Figure 4-10), the need for such an artery, linking the north and the south in the western parts of Tehran, as a continuation of Kargar St (east of Navvab) has been envisaged. It appears that there was a need for such a linkage and this plan emphasised this need.

Initially, the Navvab axis was a neighbourhood axis, west of the city and mainly functioning as a link to the outside. Later, as the city developed, it become integrated into the city, indeed one of its main internal axes, and accepted a much heavier load of traffic. The characteristics of the traffic along this axis at the time when it played a vital role in the urban system, was in proportion to the role it played. But eventually these characteristics changed and it had to play a role beyond that of the district (serving a region comprising of Districts 10 11 and 17). This was particularly so, as most of the traffic travelling on this axis simply passed through the area which was neither their origin nor destination. This was especially so because the area was positioned in the central parts of the city as far as its growth was concerned.

The characteristics of the region as regards land use (especially in the southern parts where workshop, warehouses, travel agencies, terminals etc were concentrated) brought a particular type of traffic to the area, a great deal heavier than in the other parts of the city. According to the statistics provided in the Plan for the Reorganisation of Tehran, before 1991, District 10 had 5% of all such workshops and the other land uses, while District 11 had 12% of these land uses. Overall, about 15% of these workshops, as well as similar land uses of the entire city, were located in this area.

Furthermore, in future, traffic coming from the southern parts - from Behesht-e-Zahra graveyard, to some extent from the new airport and some of the vehicles travelling between Tehran and southern and south-western Iran - shall be attracted towards this axis (Navvab). In addition, once Be-sat and Azadegan city motorways come into service, Navvab shall be the only south-north axis in the west of Tehran.

The emergence of a linked network of city access ways connected to a circular road, which was proposed to control the city's expansion on the one hand, and Navvab's role in facilitating and directing the city traffic, according to a model that gradually emerged in response to the city's public transportation, on the other, naturally made this axis a complementary section of the south-north connection in a part of the city where traffic was heaviest.

The Navvab axis eventually took shape within this framework. These conditions also finalised the decision regarding connection to Chamran (ex-Park-Way) motorway as proposed earlier (Plan for Organisation of City of Tehran – revised and amended Comprehensive Plan – 1991).

4.6 Navvab and Town Plans

In general, as the physical elements of any city gradually and organically take shape, they possess the capacity to be flexible in proportion to the roles they play. For a time, they can bear larger loads than initially envisaged for them. When quantitative developments demands qualitative evolutions – in other words, when the city needs a revision to be made in its role in the super-system and a redefinition of its programme, changes usually occur as measures which depend on the planning model and the management of the city. Certain measures become necessary in such cases, which official and legal criteria support and foster.

In the years following the events of 1941 (occupation of Iran by the allied forces), the Navvab axis developed in an atmosphere of deliberation and planning that was symbolised by the Access Ways Development ACT (1947). Navvab took shape according to the space and region it passed, varying in width from 16 m to 20 m, depending on the needs of the area.

Since Navvab was situated in the central parts of the city, it had to serve a relatively larger population and support heavier traffic and congestion. It also had to link neighbouring regions as people, goods and services crossed from one neighbouring region to another. As its level of importance and its position in the city changed, the factors, which shaped its physical structure, also changed correspondingly.

In the new circumstances, a 12-16 m-wide axis could not satisfy the needs of the area, which demanded an arterial access way. Thus, Navvab Street took shape as an artery faced with circumstances, which developed more rapidly than Navvab itself, could. Because of a series of city elements, which emerged along this street, as Navvab was taking shape, Navvab was unable to bring about major qualitative adjustments on its frontages. So, it became necessary that, at a certain stage, when problems and difficulties had sufficiently accumulated, justifying certain "measures", a plan should be prepared though its implementation might be deferred to a suitable time.

The first plan that dealt with the subject of "Navvab" in such a context was Tehran's Comprehensive Plan of 1969. This presented the Navvab axis which was thus far a local/neighbourhood street as a possible main/arterial (region-city level) route in the city's transportation network and as playing a far greater role than a local access way. It proposed Navvab as a wide artery joining the north and south of Tehran on the western side of the city.

This recommendation, in view of the changes that had taken place in the conditions of Navvab by then, appeared quite natural at the time. The axis of Navvab and the areas it covered were considered as a newly developed neighbourhood with the general characteristics of such developments in the outskirts of the city. The waves of city life that rippled into the area coming from the central parts of the city gradually disappeared, fading with increasing distance. However, later, as the population of the city increased, new chains of growth emerged around the old sections, especially in the west of Tehran, where growth was fastest. Indeed, Tehran's Comprehensive Plan recommended the same

trend, i.e. growth in the western direction. Consequently, Navvab was drawn more and more towards the central parts of the city, requiring in the process, new characteristics and needs appropriate with its new conditions.

The 1969 Comprehensive Plan, in addition to viewing Navvab as a main arterial route, which should be modified to conform to the requirements of such an access way, paid attention to improving and reconstructing the old and poor texture on both sides of the axis. Navvab was a part of a region that had been found to lack desirable qualities and to require reconstruction.

The Comprehensive Plan suggested that 600,000 people living on the two sides of Navvab be moved to other regions that were selected to serve for future growth of the city. Such large-scale transfer of inhabitants could be considered as a step towards reduction of congestion and overpopulation.

The Sofretu Transportation Comprehensive Plan, which attempted to resolve Tehran's population issues in the early 70s, intended to improve the city's access way network and make it compatible with the city's transportation network. The capital was fast growing and changing, and needed the adjustment of many of its aspects such as its access network. The Sofretu Plan strongly emphasised circular belts (roads) round the city enclosing it as the nucleus, with some of the major access routes such as Vali-e-Asr Avenue, Modarress motorway running north-south and linking these two important parts of Tehran. It also emphasised the continuation southwards, of Amirabad Avenue as a north-south minor artery running parallel and immediately next to Navvab, as a minor city artery. The extension of Chamran (ex-Park-Way) city motorway as a continuation of Modarres (ex-Shahanshahi) motorway from the farthest parts of northern Tehran down to its southern parts, was also to be implemented. Modarres was to pass Abbasabad as a two-level crossing, a necessity foreseen in the plan. It would then pass Bagh-e-Shah Square–Garrison to meet Azadegan Motorway, the southern circular belt (Figure 4-10).

In another part of the city, a major arterial road would run from Sattarkhan (ex-Taj) Street in Tohid (ex-Kennedy) Square, southwards along the Navvab axis. Later, this plan was cancelled, probably because of the high costs of land and property or some other difficulties in land purchasing. Instead, it was decided that Kargar (ex-Amirabad) Street and the other existing roads be repaired. It was also decided that the north-south motorway did not need to pass Horr (ex-Bagh-e-Shah) Square, rather, it would take a slight turn to reach Tohid Square and would meet Navvab from there and run along it to join Azadegan, the southern circular belt, in the southern parts of the city.

In 1985, a plan was prepared by the General Department of Technical Development, under number 3000/179, which stressed the very need for implementing the motorway in continuation of Chamran, beginning from Tohid Square and running along Navvab down to Ghalehmorghi Garrison there to join the Azadegan Motorway.

Tehran's second comprehensive plan (the Plan for Organising Tehran) ratified in 1991 also strongly supported the idea, as a number of other proposals of the previous plan. It chose Navvab to become a major access route, a motorway in continuation of Chamran.

In 1990, the Article 5 Committee of the High Council for Town Planning and Architecture, in its 149th session, passed a resolution in confirmation of Plan 3000/179 which it somewhat modified. (The Council had recently proposed that a width of 3-10 m should be allocated along each motorway to green space.) According to paragraph 3 of the relevant minutes of the meeting, in addition to the suggested 45-m width on either side of the route, a width of 57.5 m along the route was to be allocated to plans envisaged by the High Council for Town Planning and Architecture.

Finally, in the meeting that took place on June 11, 1997, at the request of the Technical and Developmental Deputy of the Municipality, Clause 5 (Paragraph 1) of the minutes of the 365th session ratified the new limits of Navvab. It should be noted,

however, that even before this meeting, the Navvab Project was under execution and a considerable part of the axis had already been reconstructed.

4.7 Navvab: The Idea and Its Transformation

Navvab Street eventually became a local and inter-neighbourhood access way of 16-20 m width on the south of the east-west axis of Eisenhower (presently Azadi) Avenue, within the framework of the Law on Development of Access Ways. It was then, for the first time, considered in Tehran's Comprehensive Plan (1969) as a cohesive city element with an extra-neighbourhood, or extra-regional role.

The issue of the reconstruction of the congested texture of this region, which lacked the desirable qualities of a satisfactory city district, combined with the need for linking the northern and southern parts of the city, made necessary a second plan for a network in this region. These issues led to a plan for a network that could handle traffic three times as heavy as before and which, according to Tehran's Comprehensive Plan (1969), was to be located in Navvab, where presently the plan is being implemented (Figure 4-9).

This decision was the result of studies that had been carried out towards the Comprehensive Plan and was based on the model and views put forward by this plan. For example, the said studies took place at a time when the number of vehicles circulating in Tehran had risen from 44,150 in 1962 to 85,468 in 1967, a growth of 100% in five years. This growth indicates the need felt for a network that was in line with the rapid population growth on the one hand, and an increase in the number of motor vehicles – the result of a rise in per capita income on the other.

All the points previously discussed concerning the past (see **4.3 Navvab: How It Took Shape and Grew**), and especially the stipulations of the Comprehensive Plan, and more particularly, the need for a 45-m-wide route in this region, were concepts that determined the future shape of the region.

Because the exact route of the project had not been carefully studied and planned, a vast area of the region naturally became affected. Many projects envisaged for the region such as work on buildings and the infrastructure came to a standstill, pending careful review and decision-making regarding the exact route of the proposed axis.

Obviously, such a state of ambiguity and uncertainty discouraged any attempt at investment in the region. Indeed, decision-making on developmental activity in the region was so seriously delayed, that the situation led to the deterioration of the existing buildings in the region. It also caused declines in land prices, which lost attention to investors and developers as a result of ambiguities in the decision to implement the project.

For 22 years following the ratification of the Comprehensive Plan, which envisaged Navvab becoming a major city artery (till work was finally begun in 1991), all that was done in practice was to freeze the texture of the region to a width of 45 metres. The remainder of the proposals of the plan, such as the renovation of the old, decayed parts of the region, remained idle. As pointed out in the previous section (**Navvab and Town Plans**), the views and varied actions of the city management and the municipal authorities and decision-makers with respect to Navvab, ultimately resulted in the idea of Navvab rising from a major arterial road to a city motorway as the continuation of Chamran (ex-Park Way) running from Tohid (Kennedy) Square, to the south circular motorway.

The transformation in the idea of Navvab cannot be separated from the transformation that the city underwent. Although the idea of Navvab was delayed from time to time for some reason or other, each time, it was reconsidered in the next stage with something more added to it. This is another positive aspect of the idea of Navvab: that, as a time passed, it was given added potential to cope with the new circumstances. Attention paid to the subject of Navvab at each stage was from a different angle but it always included the points raised previously, even though the priorities changed.

The physical growth of Tehran meant that the previous marginal areas would be further and further drawn inwards relative to the new outskirts. As they were drawn inwards, they would acquire the characteristics of the city neighbourhoods. This is clearly what happened in the case of Navvab because its present position in the geographic centre of the city is the result of its gradual development and the emergence of new outskirts to the city. It also had to accept larger and larger roles with respect to the regions neighbouring it, especially, with respect to linking the north and south of the city. The proposal to connect Chamran (ex-Park Way) motorway to the south circular motorway (expressway), in comparison with the initial proposal regarding a major city artery (Tehran's Comprehensive Plan), is the result of these developments.

Another issue that joined the idea of Navvab in its development was the question of the "Navvab Canal", a project for the expansion and improvement of the surface water drainage system, which envisaged a main underground canal to run along the route of Navvab. The physical expansion of the city and the rapid implementation of many construction development projects on the beds of seasonal creeks, which previously drained precipitation waters from the higher northern parts, downwards to the plains south of the city, disrupted the natural drainage system. So a new drainage system was required and this helped the idea of the Navvab Canal to emerge and consolidated the plans for the route with the canal running below it.

At the end of the war with Iraq, an opportunity presented itself for fundamental changes to be made in the programmes and indeed in the general system and organisation of the state. A new method of thinking about city development and management emerged, especially, in Tehran, which offered the best potential for the display of the new thinking. The new city management, in view of its aims, had special needs and characteristics and abandoned projects. Earlier, it was pointed out what the move was (**4.1 Why Navvab?**). What is dealt with below is the idea of Navvab, one of the earliest that was given attention at this time.

The Article 5 Commission of the High Council for Town Planning and Architecture (Art 5HCTPA) issued a ratification dated June 30, 1990, which revitalised the project. According to paragraph 3 of the minutes of meeting No 149 issued by the Commission, the 45-m-wide limits were increased to 100 m.

It should be pointed out that the increase in the proposed width from 45 m to 100 m was one of the top decisions of the municipality's management, taken in order to justify executive strategies. There was no expert evaluation and justification, at least no written evidence, no document as to any study, feasibility and justification of the project prior to the decision taken by Article 5 Commission (Art 5C).

The first step was the study carried out with respect to a possible motorway extending from Chamran as its continuation from Tohid Square, down to the site of the abandoned airport of Ghal-e-morghi and connection to the Besat motorway to Azadegan Freeway. The scope of the studies was classified under three categories:

a) A survey of the traffic conditions and route tracing of the motorway at the scale of 1:2000 (detailed study)
b) Feasibility study on the conditions of the areas on the two sides of the motorway
c) Regulating the plan's implementation

Another factor, which had a considerable effect on the idea of Navvab, was the age and poor condition of the buildings in the region. First, a plan for a major arterial road (45 m.) was proposed but no action was taken. Then the Navvab motorway was proposed (based on legal ratification) and again postponed. Meanwhile, the area "froze" because of ambiguities and so no building was carried out in the area, an area which, as long ago as 1968, had been found to be so poor in the quality of its buildings that they were planned to be destroyed and the inhabitants were to be moved elsewhere (Comprehensive Plan). Delays in the execution of the projects and hesitation in building and repairs resulted in

greater degrees of wear and ruin. So much so, that in the end, there was every reason why entire buildings should be pulled down, as far away from the axis as the budget of the plan would permit.

So, wear and tear the texture of the region, uncertainties with respect to development projects prepared the grounds for the "Idea of Navvab" to emerge, and gradually to transfer.

The idea of buildings on the sides of the motorway occurred to the planners, mainly as a means of financing the project. Other reasons for the planners' decision were:

1. Implementation of a typical project in urban planning and in the idea built on the sides of a motorway.
2. Provision of considerable residential space within city limits using the city's own resources and through the concept of land reclamation.
3. Making use of all the existing city infrastructure facilities as compared to an independent project that would provide the same volume (floor space) of residential space which demand an infrastructure that would be very costly. This made the Navvab Project seem feasible.
4. Displaying the technical and professional capabilities of Iran in design, implementation and execution management with two objectives: absorbing foreign direct investment and building confidence in domestic investors.
5. Building up confidence and attracting small off target capital to development projects through the implementation of one successful large-scale exemplary project by an organisation (the Municipality of Tehran) which would displayed its speed and large extent of action. It ended with the issuance of bonds offered to the public.
6. A tool for change and reformation in the eyes of macro-management and among the highest of statesmen.
7. Putting into action the development process and providing a model for the development and reconstruction of the old and worthless sections of the city.

These factors put together caused the transformation of the idea of Navvab from a major artery (1968 Comprehensive Plan) to the final idea of a project comprising of a city motorway, access ways to the regions on either side of it, multi-level crossings, buildings on the two frontages, residential complexes etc. The final idea was developed in 1991 as a cohesive project.

Part Three
Surveying and Observations

- Introduction
- Survey Data ..... Chapter Five
- Documentary Data ..... Chapter Six
- Participant Observation ..... Chapter Seven

Introduction

In this section, the author analyses the data obtained from the research study as well as from the methods, which were discussed in the Methodology Section. The following issues will be elaborated on in three different sections namely:

- Survey Data (Chapter 6)
- Documentary Data (Chapter 7)
- Participant Observation (Chapter 8)

Survey Data

The survey method has been employed firstly to obtain the opinions and the attitudes of people and the greater society of citizens and secondly the smaller society of specialists and experts in the urban issues. Due to the broadness of the field of study, two different techniques, methods and procedures were employed. In presenting the findings, first the methods and the specifications are submitted under the heading of procedure, then the findings of each is analysed and finally the result of each survey is presented.

Documentary Data

The documents which related to the procedure of the Navvab Project were miscellaneous, and at the same time in disarray because there was no order to their collection. After investigations into the classification methods of the documents, two methods were chosen:

1) The public documents (newspapers and journals) that were available to the public and which have an historical nature. 2) The official and administrative documents that were not available to the public and which typically, have a descriptive nature like contracts, agreements, design reports, plans, administrative correspondences, agendas etc.

There were three stages to the examination of historical reports (newspapers and journals) and descriptive reports (administrative documents), namely idea, design and performance. In some of the documents, some points focusing on the economic and managerial aspects were examined as well.

Participant Observation

The author's presence in the Consulting Organisation (TSC) and the responsibility that he had there, provided this possibility for him to be present in the process of decision making and planning of the main projects in Tehran. Hence, very often, the author had the opportunity to get involved and participate in such processes and he would be kept informed about the events in this regard. His position as the managing director of TETCO, being responsible for the studies, providing the designs and plans (in their large scales) and at the same time, his own incentives and obsessions, led to his active and direct participation in these issues.

The Navvab Project, its proposal, design and plan, was initially presented and propounded in the Consulting Organisation (TSC) but later was handed over to Tehran Abadansaz Company for the performance phase. Nevertheless, the author's attendance in the commission as a plan and design investigator, in the Tehran Specialist Council and in co-ordinating meetings of development projects for the city, provided him with this opportunity to witness the Navvab Project process, from the stage of project formation in 1990-99, to the time when the project came to a relative halt.

At first, the idea of Navvab was being revised and modified but consequently, at the project design and planning stage the author's attendance and participation was direct; eventually, as the project entered the implementation phase, his attendance was mostly in the form of being informed about the undertaken works. In 1997 when the "Special Studies on the Navvab Project" was being carried out in the TETCO of Tehran, with the collaboration of Bavand consulting engineers, his relation to the project became more

direct and tangible (a presence in the field of study that is reflected in the composition of the questionnaires).

5

CHAPTER FIVE

SURVEY DATA

CHAPTER FIVE
5. SURVEY DATA

5.1 Attitudes of Specialists and Directors

5.1.1 Procedure

To assess the ideas and the opinions of the specialists and directors, a joint set of open and closed questions (in form of structured and unstructured interviews) was employed. The interviewees were classified into: solution providers (architects, urban designers, urban socio-economic experts, traffic engineers, environment specialists etc.); decision-makers (the mayor of Tehran, the mayor's deputies, the mayor of the districts, urban managers, etc.); and implementers (contractors, consulting engineers, project managers etc.). The main groups were also divided into two subgroups, involved and un-involved in the Navvab Project.

Convenient access, agreement of the interviewees to a face-to-face interview, their managerial background and speciality in urban issues were among the criteria for choosing the interviewees. The involved implementers were those who contributed to the process of the Navvab Project, the un-involved implementers were those potentially eligible to contribute to this and other similar projects.

In the interview procedure, a copy of the specialised questionnaire was handed to the interviewee to answer the multiple-choice (closed) questions. They were then asked to justify and give reasons for the given responses. At the final stage, two open questions (7-1, 7-2) were presented so that they could explain the way they are/were involved in the city and urban affairs. Comments on the answers were written and the answers were recorded.

The total number of interviewees mounted to fifty-four, the distribution of which is shown in the following table.

Table 5-1 The Distribution of Interviewees (Specialised Questionnaires)
Source: The author, 2005

Label	Un-involved in the Navvab Project	Involved in the Navvab Project	Total
Solution-providers	9	9	18
Decision-makers	9	9	18
Implementers	9	9	18
Total	27	27	54

The collection and analysis of the data was derived from the questionnaires and the interviews, and software, such as SPSS and Excel were used. The answers to closed multiple questions were analysed according to the respondents' option (a, b, c and d), meanwhile the answers to the open questions were categorised into forty-four categories (including no-response and irrelevant response). These categories and their frequency distribution tables can be found on pages 9-15 of Appendix II. The quantitative result of the data can be found in Appendix II.

5.1.2 Dissection and Analysis

5.1.2.1 Introduction

The main questions of the questionnaire were designed and based on the main research questions, therefore the main categories of involvement in a city (those that were used in the comparison between the Athens Charter and the 2000 Charter) were employed as the basis of analysis. In composing the answers to closed questions the (a) and (d) options were the extremes of the process of involvement in the city so that the general tendency of the people under study could be clearly assessed.

This is followed by forty-three groupings (derived from the results of the discussions and face-to-face interviews with the interviewees) which were then classified into eleven

main categories, eight of which were related to the main concepts of this study and the rest were related to the case study (Table 5-2).

At the next stage, the relations and the grouping of closed questions and main categories, together with minor categories were used as the basis of dissection and analysis (Table 3 in Appendix II).

5.1.2.2 Analysis of the Closed Questions

The overall answers are shown in diagrams on page 14 in Appendix II. Having examined this diagram and other tables in Appendix II, pages 16-26, it could be indicated that:

1. The frequency of viewpoints generally tended towards choice (d) and then towards choice (c). In other words, the general tendency is closed to the approach of the modern period and the 2000 Charter. Trends towards early modernity (choices (a) and (b)) were few.
2. The most common ideas among the respondents could be found in questions 2-2, 6-3, 2-3 and this indicates that when the questions are about defining the public spheres, civil life, public domains of decision-making and involvement in urban affairs, the issues become more real or a higher level of certainty about the options is reached.
3. The least common ideas could be found in choices (c) and (d) in questions 6-2, 1-2, 6-1, uncertainty about the intentions of the questions and options in the answers could have led them to choose (a) and (b).
4. Overall, the greatest share of frequency goes to choices (c) and (d) in the solution-provider category and the smallest share goes to choice (c) among the implementers. This trend is somehow reversed while answering questions 6-1 and 3-1, which may be partly due to the vagueness of the questions, the lack of practical experience of the managers and involvement of the governmental sections on one hand, and on the other hand, because of the state-dependency of solution-providing and decision-making institutions.

5.1.2.3 Analysis of the Open Questions

To analyse the results of the open questions, the order of main categories indicated in Table 5-2, are used and therefore the table of minor categories of each main category, together with the diagram of closed questions are presented.

Table 5-2 The Main Categories for Analysis (Specialised Questionnaires)
Source: The author, 2005

Number	Main Category	Related Questions in the Questionnaire	Related Minor Categories
1	Urban and urbanism	1-1,1-2	1,2,3
2	Housing crisis and its pattern	2-1, 2-2, 2-3	4,7,8
3	Urbanism and involvement in the city	6-1, 2-3, 5-1, 5-2	9,10
4	Authority for city and urbanism	6-2, 3-1	11, 12
5	Whose job is urbanism?	6-3, 3-1	13, 14,16
6	Urban uses	4-2, 4-1	17,18
7	Urban elements and standards	1-2, 1-5	5,6
8	Old and invaluable context	5-2	15,19,20
9	Reasons for the failure of the Navvab Project	6-2, 6-3	
	9.1 Caused by the role of the state		11,22,23,29
	9.2 Lack of knowledge, experience and specialty		24,27
	9.3 Lack of participation, co-ordination and collaboration		26,25,27
10	Criticism of the Navvab Projects	7-2	
	10.1 Deficiency in studies, planning, design and performance		42, 43, 37
	10.2 Problems caused by the highway		40, 41, 38
	10.3 Lack of urban services and facilities		41, 39, 38
11	Suggestions on the Navvab Project	7-1	
	Establishing public space		34, 35, 36, 30
	Comprehensive studies and investigations		31, 32, 33

5.1.2.4 Urban and Urbanism

Based on the results in the table and diagram on page 16 in Appendix II, it is deduced that the greatest application of the categories with 60.28% is related to the definition of the city, urbanism, the civil life and the result of interaction of factors in the

public sphere. The least application of the categories with 12.6% is related to the attitude that defines a general concept for city and urbanism.

In this tendency the greatest share belongs to solution-providers (and among them those involved in the Navvab Project) then the decision-makers (and among them those involved in the Navvab Project) and the smallest share belongs to the implementers (and among them those un-involved in the Navvab Project). The diagram and the responses to the closed questions confirm the same proportion, and frequency.

5.1.2.5 Housing Crisis and Its Pattern

Based on the results in the tables and the related diagram on page 17 in Appendix II, it can be deduced that the tendency towards variety of life and urbanism and variety in the housing pattern and residential complexes has the greatest share (53.3%) and the smallest share (10%) is the emphasis on apartment residency and construction of high buildings.

In this tendency the greatest share is related to solution-providers and then to decision-makers (and among them those un-involved in the Navvab Project) and the least share belongs to the implementers (and among them those un-involved in the Navvab Project).

The answers to the closed questions are very close to this proportion apart from the difference in the answers to 2-2, closed question about the pattern of construction. There is a common tendency (90%) towards choice (d), which is a hybrid pattern.

5.1.2.6 Urbanism and Involvement in the City

The results in the table and diagram on page 18 in Appendix II reveal that the majority of the interviewees consider systematic involvement as their choice; furthermore, they also believe in urbanism as a process. The minor category number 9

with 73.08% has the greatest share whereas those who consider urbanism as a project have the smallest share of 25.94%. As a result, the implementers (and among them those un-involved in the Navvab Project) have the greatest share and the decision-makers, the least share. The diagram of the closed questions relatively confirms this proportion.

The possibility of a position change of solution-providers and decision-makers can be sought in the fact that considering urbanism as a process gives them less power and authority in comparison with considering it as a project.

5.1.2.7 Authority for City and Urbanism

The results in the table and diagram on page 19 in Appendix II reveal that the majority of the interviewees (with the frequency of 78.79%) consider the public as the main power and authority for involvement in urban affairs; this power can be in the form of private, public and governmental sectors.

The greatest share in this majority goes to the implementers (and among them those involved in the Navvab Project) and the smallest share belongs to the solution-providers (and among them those involved in the Navvab Project). The diagram of the closed questions shows the same tendency. The difference of proportion in the results of question 6-2 is considered to be related to the vagueness of the question.

5.1.2.8 Whose Job is Urbanism?

The results in the table and diagram on page 20 in Appendix II reveal that the majority of 48.35% is related to the attitude that sees urbanism as the result of an interaction between different disciplines in the public sphere, next comes 39.56% related to the attitude that sees the public and citizens' participation in the process of urbanism as absolutely necessary. The sum of these two proportions against the minimum proportion of 12.09% who think urbanism is solely to be performed by specialists (especially architects), makes it clear that the majority of the interviewees see urbanism as the scene

of interaction of different fields of studies and disciplines and see public participation as completely necessary. The diagram of the closed questions confirms these results.

The attitude that considers urbanism as the result of the interaction of different fields of studies and disciplines is mostly seen among the solution-providers and decision-makers. The least share belongs to implementers (and among them those un-involved in the Navvab Project). The attitude that sees public participation as necessary is mainly seen among the decision-makers (and among them those involved in the Navvab Project) and rarely seen among the implementers (and among them those un-involved in the Navvab Project).

5.1.2.9 Urban Applications and Land Uses

According to the table and diagram on page 21 in Appendix II with the frequency of 69.33%, the interviewees generally have the tendency to see a combination of uses in the urban setting, conversely, a frequency of 30.77% are inclined to see clear-cut lines drawn between different urban applications.

The share of the solution-providers and implementers are equal and more than the decision-makers, whereas the decision-makers have the greatest share in the division of the urban applications. The closed questions confirm the general tendency but there are differences in the distribution of solution-providers, decision-makers and implementers, which are related to the kind of questions and answers. In any case, in the closed questions, there are tendencies to choices (c) and (d), and there is a small share belonging to choices (a) and (b).

5.1.2.10 Urban Elements and Standards

According to the table and diagram on page 22 in Appendix II, the frequency of category number five (68.87%) shows that the interviewees generally believe in local standards and local urban elements and find it as a result of the interaction of various

disciplines and fields of studies, while 31.12% consider these standards as universal and international. In this attitude, the solution-providers with 38.36% (and among them those involved in the Navvab Project) have the greatest share and the implementers with 30.14% (and among them those involved in the Navvab Project) have the smallest share, however, they were relatively very close to one another.

The responses to closed questions considering the combination and the proportion of choices (b) and (c), confirm this general tendency, meanwhile, in the responses to closed questions, the general tendency to choices (c) and (d) is quite strong.

5.1.2.11 The Old Context

According to the table and diagram on page 23 in Appendix II, the level of application of categories 15 and 19, considering their concepts, are very close to each other and its comparison with category 20 and the related tables reveal that the general tendency of the interviewees hold this idea that the identity of a city is related to its history. In holding this attitude, the order of shares are as the solution-providers, decision-makers and implementers, and the ones who were involved in the Navvab Project had the greatest share.

The answers to the 5-2 closed question which focuses on choices (c) and (d) (by 95%), reveals similar results.

5.1.2.12 Reasons for the Failure of the Navvab Project

According to the table and diagram on page 24 in Appendix II, the main reason stated by the respondents was the involvement of the state in the project, the solution-providers and decision-makers have the highest percentage in holding this idea.

Lack of public participation and co-ordination between the institutions and organisations has been stated as the next important factor, with solution-providers and the

implementers in order of the holders. The answers to closed questions confirm the existence of these tendencies, the relative frequency in choices (a) and (b) for question 6-2 relates to the ambiguity of the options.

5.1.2.13 Comments and Criticism on the Navvab Projects

The table on page 25 in Appendix II, which is related to question 7-2, shows that three problems presented, namely; problems related to the performance of the highway, a deficiency of studies and planning and lack of urban services and facilities, have relatively the same frequency. The distribution of opinions among the implementers (whether involved or un-involved in the Navvab Project) are relatively very close, which is related to specific realities, this is not seen among the solution-providers and the decision-makers.

The problems related to the highway and lack of urban services and facilities are associated with imperfections in studies and planning or the method of involvement in the city.

5.1.2.14 Suggestions on the Navvab Project

The table on page 26 in Appendix II, related to question 7-1, reveals that creating and developing public spheres is at the first level with the frequency of 67.11% and next comes the comprehensive studies and investigation with the frequency of 32.89%. The first level is associated with the decision-makers and the implementers, and last come the solution-providers. Tendencies to the second suggestion are mostly seen in solution-providers, decision-makers and implementers. These changes in priorities reveal that solution-providers have more tendencies towards studies and investigations.

5.1.3 Conclusion

Based on the information gained through closed and open questions, the following can be concluded:

A. The general tendency and the overall outcome of the interviews show that, city and urban elements are local, systemic and complex phenomena, and they should be dealt with in a systematic approach.

Civil and urban lives are based on the public sphere of social interactions.

The physical space of a city is dependent on the public space that is the location of interactions, exchange and combination of urban uses.

Urbanism is not an isolated single science; rather, it is the product of an interaction of disciplines.

Urbanism and the involvement in the city and urban affairs is a process rather than a project.

Citizens are the main power and authority of urbanism and involvement in the city, hence in the process of urbanism and involvement in the city and urban life, the contribution of the public is essential.

The identity of a city, urbanisation, every district and context, is based on its history. Therefore, in the process of involvement in the city, this point is to be taken into consideration.

B. Categorising the respondents to solution-providers, decision-makers and implementers, and classifying them into "involved" and "un-involved" subgroups in this project caused meaningful effects in the analysis. Nevertheless, for applied studies, it can be regarded as a useful instrument.

5.2 Attitudes of People

5.2.1 Procedure

The Navvab Project was considered a case study based on assessing the view and tendencies of the people who cope with a wide intervention in the city; those who have experienced certain impacts as the residents of new buildings of the Navvab Project or as the old residents of the Navvab region.

In this regard, and for finding the answer to the research question, a questionnaire containing open questions was composed. For compiling these questions and fulfilling such a plan, Dr. Nateghpour, a professor in the faculty of social science in Tehran University, was used as consultant and the co-operation of students in the field of sociology and other social sciences, urban development and architecture was also sought.

As the purpose was to ask question of new and old inhabitants, an area was selected which is bound by Skandari Street from the east, Roudaki Street from the west, Azarbaijan Street from the north and Helale Ahmar Street from the south (the sketch drawing has been offered in Appendix I). The Navvab Highway is located at the centre of this area with new constructional complexes (in phases 1, 2 and 3) on the sides that were transferred to the residents. The residents are residing in 100%, 95% and 30% of the units in phases 1, 2 and 3, respectively.

In addition to an even distribution of questionnaires between new and old inhabitants, a demonstrative proportion was also derived from the residential buildings that finally led to the distribution and completion of 224 questionnaires according to the following table.

Table 5-3 The distribution of Interviewees (General Questionnaires)
Source: The author, 2005

		Phase 1	Phase 2	Phase 3	Total New Residents	Total Old Residents	Grand Total
East of the Highway	New Residents	16	27	8	51		101
	Old Residents	16	27	7		50	
West of the Highway	New Residents	27	27	7	61		123
	Old Residents	27	27	8		62	
Total		***86***	***108***	***30***	***112***	***112***	***224***

It should be noted that:

1. As in the old area of the region, on the east of phase 1 and the highway, fewer residents live (the area with less population density); therefore, fewer shares for old habitants has been specified in comparison with the new habitants under study.
2. Phase 4 (on the south of Helale Ahmar Project) was neglected from the study area, because of the following reasons. Navvab constructions in phase 4 had been abandoned at the foundation stage; the continuation of the Navvab Highway has not been carried out despite the traffic route, which is passing through it; phase 5 of the north part of Azerbaijan Street was not included in the implementer stage of the project from the very beginning.

Qualified university students who were trained for such a programme in five days and then the received answers did the procedure of questioning (Table 7 in Appendix I) and the obtained information was recorded. At the next stage, the responses were extracted and categorised as can be seen on pages 5-8 of Appendix I. After encoding, the information obtained through the questionnaires was analysed (by SPSS software) and then their one-dimensional tables were extracted, which are presented on pages 9-23 in Appendix I.

5.2.2 Data Analysis

5.2.2.1 Introduction

The main purpose of this questioning was to find people's views and their reflections on the Navvab Project and the affects of this project. It was attempted in this survey to measure people's view with concerns about the involvement (of the project) in the city and city construction works, city residency and urban efficiencies. Therefore, in addition to composing a connective table among planned questions, it was attempted to present genuine texts in this regard, present extracted tables of the preliminary analysis, take advantage of such a relation towards analysing this questionnaire, and present the related results.

Table 5-4 The Main Categories for Analysis (General Questionnaires)
Source: The author, 2005

Related Table	Related Question	Original Subject
7, 11, 10	7, 11, 10	Urban Life (Civil Life)
3,6, 8, 11, 10	3, 6, 8,10,11	Urban Development and Interference in the City
5, 1	5, 1	Urban Efficiencies
9	8, 5, 9	Old and Obliterated Area – Old and Valuable Area

5.2.2.2 Urban Life (Civil Life)

The answers to question seven and the reasons given in this regard, (Tables 7, 7-1, 7-2 in Appendix I), can be seen as the attraction to and/or dislike of the Navvab Project. The outcome of public views and preferences are based on the following issues:

Reconstruction of the old area and creation of modern buildings, plus supplying proper welfare facilities that match with the modern way of life, together with the local availability of space for human and friendly relations.

In other words, in addition to their tendency for abandoning the old area and neighbourhood, and living in a more modern place, the respondents were also eager not only to preserve the quality of their past living spaces, which reminded them of their past, but also were willing to present their suggestions and tendencies in the development planning. In the section of surveying the old area, this matter will be investigated and analysed from another aspect.

5.2.2.3 Urban Development and Interference in the City

The effects of the Navvab Project as a sample of interference in the city was researched through questions 3, 8, 10, and 11. The results obtained from these questions suggest the following issues. The comparisons of total results of the answers to questions 10 and 11 of the questionnaire are presented in the following table.

Table 5-5/1 People's View on the Impact of the Navvab Project
Source: Abstracted from figures I.3, I.8, I.10 and I.11 in Appendix I.

Subject	Per cent	Per cent	Subject
Inside the buildings and cultural problems plus cultural contacts	24.6%	65.6%	Having welfare facilities, being pleasing, observing urban life principles and construction by engineers
Welfare problems outside the building	65.2%	12.1%	Spiritual and mental Safety and low cost

Moreover, having confirmation that these two reasons have an influence on one another can reveal the fact that the Navvab Project takes advantage of renovation aspects; also, it has succeeded in offering new welfare facilities, especially in private units' space. Nevertheless, this project did not have any successes in solving the problems rooted in

the lack of facilities, welfare and public services that have been remained from the past. In addition, in accordance with the table of location or complex preference (See Table 7, Appendix I), the obtained results shows that the Navvab Project has caused some deficiencies in the field of presenting required public areas and spaces. In other words, surveying the results of this table with the tables of people's preferences, suggests that the mentioned project has been inadequate and inexpressive in attracting and satisfying people in the field of their urban life (civil life), not creating the required public locations and spaces.

Surveying the answers related to questions 3 and 8 shows that on the one hand, most residents have chosen an accommodation supply through the mass construction of housing blocks like Navvab, and on the other hand, a considerable number of people (68.2%), assume the public problems of the Navvab Project resulti from ambiguity in urban development policies.

Table 5-5/2 The Difficulties and Suggestions (People's View of the Navvab Project)
Source: Abstracted from figure I.3 and I.8 in Appendix I.

Situation	Per cent
Lack of clear policy of urban development	68.3%
Region's cultural and social situation	14.3%
Region's economical situation	3.1%

Situation	Per cent
Fulfilling the projects similar to the Navvab Project	54.5%
Offering loans to people etc.	44.2%

Looking and assessing different responses and results which were offered regarding the problems and deficiencies of the Navvab Project (Questions 10 and 11) and the respondents' emphasis on the standards and construction quality, show their attention towards skill, standards and technical principles. In any case, up to this stage, the

following issues can be comprehended. Firstly, in such redevelopment and construction projects, and interference in the city (both as direct execution and/or financial support), people assume the presence and support of the government is indispensable; secondly, they consider their awareness of information and clearance of urban development policies necessary for their lives and the future of the projects. The problem and weakness that result from a lack of awareness and the contribution of the residents in the city's redevelopment process, and its relation with their level of satisfaction, can be found out from the following issues. The responses of the people to question 6; their sources of information about the Navvab Project; their common news sources, which is 20.5% for the public media and 21.9% from face-to-face encounter.

5.2.2.4 Urban Efficiencies

Surveying the problems caused by the Navvab Project (Question 1) indicates that inconvenience and interference of efficiencies (highway and residual complex) and lack of availability of urban facilities (the efficiencies required by urban life) are some of the alleged difficulties mentioned about the project. In other words, the Navvab Project has caused a disturbance to the old urban efficiencies in the region and lacks the provision of facilities and services (elevating the level of required urban efficiencies) required in the new policy. In this regard, the highway that has been the prominent aspect of the Navvab Project has been identified by 35.6% of the respondents as the biggest problem (Table 1, Appendix I). On the other hand, through surveying the responses related to question 5 and the given reasons (Tables 5 and 7, Appendix I), these state the tendency of 61.4% of the respondents towards living in the area. Among the given reasons, the convenience of the area with 55.1% and facilities' provision, with 30.5% has the highest proportion as the first preference. Ease of access, plus friendship, respectively with 28.6% and 23.2% have been presented as the second preference.

Taking this viewpoint of the people and their emphasis on the spaces that offer them ease of access and a friendly atmosphere, one can conclude that public preference and

views are based on physical closeness of urban efficiencies. Their probable mismanagement would cause disturbance and interference in the provision of facilities and raises obstacles in the way of developing and creating other urban facilities.

5.2.2.5 Old Structure

The results obtained from question 9 state that 52.6% of people agree with destroying the old area bearing historical value (agreed and half-agreed) and 32.5% disagree (disagreed and previously-disagreed) and amid these two groups, 29% are proportionally indifferent. On the other hand, for question 5, 43.8% of people assume the new image of Navvab is better and 17.9% like the old situation of the region and the other 9% could be attracted with some alterations (of course, 37.5% have not answered).

This matter shows the public preference for renovation of the old situation, especially regarding this action in an area like Navvab, where for a long time (25 years) no building construction and renovation has been carried out and the destruction of its body is obvious.

When the reasons for disagreements and agreements are followed, it is revealed that on the one hand, 29% of those who agree with modern construction works in the area would continue to do so, if the historical buildings are preserved (Table 9.1 in Appendix I). Regarding the total number of agreements, 52.6%, it can be concluded that 23% of the society assume a disagreement with the destruction of historical structures. On the other hand, 15.2% of those who disagree (out of 32.5% of people under question) do not agree with the worthiness of preserving old buildings. In this way, destruction of historical structures in this category equals 5% and with adding the two groups, this percentage will amount to 28% of the respondents to question 9 who disagree with destroying the old structures.

Although the proportion of disagreement with destroying old and historical structures equals 28%, it may be a case of asking separate questions related to old and historical

structures (if the survey topic was on the basis of historical structure) clearer answers would be obtained. Knowing the previous situation of this district and the old structure of Navvab and the suspension of construction and renovation works for a long time (due to the execution of Navvab Plan), it can be concluded that from the public viewpoint, renovation and offering modern facilities for living is acceptable and the old structures are not worth being preserved. However, confronting the old historical structures in such a renovation should be put into consideration.

5.2.3 Conclusion

The analyses which were presented mentioned various issues and the research original offered, together with the general surveying work and the general analysis of the responses and responders' views, all together led the researcher to the following conclusions that:

1. People welcome the modern urban life that has been formed, providing that the common living (whether social, cultural or moral) values of life are preserved. Being within easy access to each other, variety in and the combination of efficiencies, especially in the public sphere, are among these common values, which the locals are eager to conserve (public sphere and public space).
2. The government is assumed effective and useful in urban development and in the redevelopment process in the city, but this is mostly desired and wanted in relation to reciprocal awareness and co-operation (creation of public sphere between people and government).
3. The value and significance of skilful and scientific works in the redevelopment process throughout the city have implicitly been expressed in terms of using words such as beauty, technical and standard bearing.
4. Encountering the old structure of the city, the general tendency is towards its destruction and reconstruction. However, a considerable percentage is against this trend and does not like the lack of attention to their values for conservation.

CHAPTER SIX

DOCUMENTARY DATA

CHAPTER SIX
6. DOCUMENTARY DATA

6.1 Official Documents

6.1.1 Idea

The concept of the Navvab Project was considered at two different periods (in the 1960s and then from 1990). In the first period, it was known just as an inside city highway and at the later period (since 1990), the Navvab Idea become popular through the two elements of "highway", and "the constructions" around it.

In 1996, based on "Passages Development Law", a design was prepared under the title "South Navvab Street Continuation" and it was indicated in it that Navvab Street should be widened from Azadi Street cross (formerly Eisenhower) to Firoozabad Street (presently Hagh-Shenas Street) to a width of about 25 metres.

In the Tehran Comprehensive Plan, approved in 1969, in order to get fast access from north to south and to complete the Tehran Highway Network, a highway was envisaged, from Mahmoudieh Cross (presently Vali-e-Asr) and connected to the end of the present Kargar Street and its length passing from the rail-road and up to the Ghaleh-Morghi Garrison.

In the "Tehran Master Plan of Traffic and Transportation" approved in 1974, these two ideas and the alterations were integrated and they occurred on the fore-mentioned axis path (cutting off the west side of that highway for constructing the cross to Resalat Highway). Therefore, it was suggested that these two highways should meet each other in Kennedy Square (presently Tohid) and connect north to south.

In this "Plan", the Navvab axis and its continuation along the Park Way Highway to the Vanak area, is seen as the circular east side which has been created around a central condensed area; it should contain all the main trading centres of the city; it should play the role of conduit for the traffic, which exists for its destination to the

central region, and make for easier access to the areas around the central region, inside it and the nearby areas (Figure 4-10).

The highway width between Kennedy Square (presently Tohid) and Eisenhower Street (presently Azadi), was reduced from 40 metres, although it was considered 45 metres in the Tehran Master Plan of Traffic in 1974 under the minute of meeting no.134, July 7, 1973 (the approved text is presented below).

"The committee of investigating the designs suggested the Navvab Street narrowing plan between Eisenhower and Azarbaijan Street to 40 metres width. This was proposed while considering the fact that the detailed maps indicated a 45-metre width for this street. Regarding the existing basic and recent constructed buildings, its widening is not practical, because of the heavy costs; therefore, it was decided to act according to the above suggestion."

In 1985, a design was approved in the Technical Department of Tehran Municipality, no. 3000/179, according to which, the Navvab Highway Plan between Eisenhower (presently Azadi) to Ghaleh-Morghi was registered with a width of 45 metres.

In 1990, the map: "Connection Routes Network of Tehran Master Traffic Plan" was investigated and controlled, based on approved designs, through the Traffic Organisation of Tehran Municipality and was offered to the Municipality departments as the base document of the work. In the map, the discussed highway path was indicated as a part of 45 to 76 metre streets.

In this way, the Navvab Highway Idea, a part of the Navvab Plan Idea as a part of the main idea, was formed with the purpose of completing Tehran city's highways and providing fast access to all areas. Up to then, these ideas had existed separately from each other, and now with integration, they specifically created an easy connection from north to south.

In the 1990s, a highway with a width of 45 metres, having six runways, with a speed limit of 80 Km./h. and a 10-30 m. green boundary at the edge of the highway[1] for greater road safety, was the subject of construction around the highway as another part of the idea.

Although the Navvab Plan's goals were both housing the former residences of Navvab Street and providing financial resources to fulfil the highway project, the purpose and eagerness to provide financial resources for the project implementation and to produce the income still remained as the basic and key aim of the project.

On June 30, 1990, the Commission of Article 5 of the High Council of Urban Development, Note 3 of the minutes of meeting No. 149 (its translation is offered below) approved construction of the Navvab Highway , with a few specifications.

"Under the MOM no. 134 dated July 7, 1973 of Coordination Council, the Southern Navvab Street from Azarbaijan Street to north highway of Ghaleh-Morghi Garrison (Executive Design no. 3000/179) stated in the Commission. The recent order of Urban Development and Architecture High Council was about allocating at least 10 to 30 metres width to green spaces, to a part of properties consideration located in the design and to proper access to the adjacent properties. In order to execute this, it was agreed that adjacent approved 45-metre path (Executive Design no. 3000/179 and the designs of cross and detailed plan appearance) would be increased at least 27.5 metres in each side, along the buildings."

And following it, the fore-mentioned Commission, on the basis, primarily of the plan offered by Atek Consulting Engineers (ATCEC), according to Note 2 of its minute of meeting No.191, March 12, 1991, approved the related maps of the highway design and constructions around Navvab. According to Municipality officials and project authorities, the subject of the construction areas around the

[1] ATCEC (1990), the project of Shahid Chamran Highway continuity – Broadening Navvab, ratified by the supreme council of urban planning

Navvab Highway, a highway at the super-regional scale, was formed to fulfil the following aims:

- To renovate and reconstruct the old and amortised areas of Navvab;
- To create residential and service applications proportional to the region's needs and priorities;
- To exercise the regulations and standards for urban development and offer a city-wide system and self sufficiency to areas and urban regions;
- To promote housing quality and present new residential patterns;
- To renovate the city and apply it as a proper pattern in other old areas; finally,
- To interfere in the urban scale as an abstract and summary of stated urban development and architecture abilities in the form of another element of the the Navvab Idea purposes during 1990-91.[2] [SENSE?]

Surveying the documents related to the economical issues related to the Navvab Project indicates that three parts were paid attention to:

- Supplying plan credit and budget;
- Compounding and allocating the costs;
- Profit and outputting.

Although the primary ideas were formed on the basis of added value results of the constructional plans, implementation and returning a part of it to the urban development path of the 1940s, in planning the Ministry of Interior's affairs (as a change of planning and executing the urban development designs through the Municipalities)[3] such an idea was put into practice.

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[2] Technical and Development Deputy of Tehran Municipality - TDDTM (1994), Navvab project feasibility report , PP.2,3

[3] Kalantari, Iraj (2000) personal notes, he was then involved in that section of the Ministry of Internal Affairs and is now the managing director of BACEC (one of the consulting engineers in Navvab Project)

In the previous years, projects such as Navvab, which were categorised in the form of constructional designs of the city, were supported by construction budgets of the Municipality with no need for the specific pre-grounds for the financial supply of the project. In the 1990s construction period, financial resources for the constructional projects was one of the responsibilities of the related areas' managements and Tehran Municipality, in contrast to the project plan before 1990, which was totally deprived of governmental resources and budgets. The Municipality itself was obliged to supply the perseverance, construction and development cost for the city; therefore, the idea of gaining project executive costs through interests obtained from investment in construction around the highway, was formed. Preparing for this idea, it was decided to widen the Navvab Path from 45-100 m. and to divide the whole project into two sections, profitable and non-profitable.

The land around the highway, which was going to be constructed and then sold, was considered as a profitable section; highway construction and its boundaries that had constructional and public aspects, were assumed as non-profitable.

Regarding the subject of profit and outputs, the documents' survey shows that in addition to the financial resources' provision for project implementation, providing the Municipality income is also considered, therefore, it could use such an income in motivating a construction cycle and old areas' renovation. In this way, the profit obtained from selling constructed units with the accumulation of 325%, could provide the constructional costs[4]; the determined accumulation by the client was very much higher than what was mentioned.[5]

Regarding the inefficiency of the old constructions offered by Tehran Municipality, and the negative public idea towards the Tehran Municipality and its new management, the new management searched for new tools to fill the existing gaps and to replace modern and capable complexes, therefore, attempts were concentrated in establishing specialised and technical institutes and organisations.

[4] ATCEC (1990), the project of Shahid Chamran Highway continuity – broadening Navvab

[5] TDDTM, letter no. 70.45208, dated November 3, 1990

During 1990-93, some organisations were established in the Technical and Constructional Deputy of Tehran Municipality, organisations such as: Tehran Technical and Engineering Consultant Organisation; Tehran Engineering and Construction Organisation; Tehran TadbirBaft Company-TTBC; Tehran AbadSaz Company-TASC; Khak-e-Sahra Company-KHSC, etc.

6.1.2 Design and Plan

The Navvab Project's main body and physical idea included a two-part highway and the surrounding constructions. First, the main body of the project included a design and plan with the entrance of the designed area; then, the access routes were suggested and added to the previous components, which caused alterations to be made to the highway and construction plan. The Body "Plan" section can be assessed in three different time phases: the years before 1989, the years 1989-1991 and the years after 1991, as follows:

6.1.2.1 Before 1989

Before 1989, the idea and plan of the Navvab Project just concentrated on the highway element, in which the highway width was determined, a width of 45 metres. It seems that the plan was allocated to lands located in the southern part of Azadi Avenue; besides, it was about a highway prolongation, continuing the Park-Way highway (presently Chamran).

6.1.2.2 1989 to 1991

By adding constructions around the highway, the highway width was increased to 100 metres. In this stage, the existing structure and traffic form of the intersections, the highway path-finding and the scrutinising of its passing road (on a scale of 1/500 – 1/2000), which had not similar levels, was fulfilled; then, the highway and the constructions around it were designed.

According to the original idea, the highway should be designed for a top speed of 80 Km./h. Therefore, the consultant engineers in charge of designing the entire path stated that one of the highway design goals was exercising all the rules and regulations, plus new and necessary traffic instructions to prevent unreasonable and illogical intersections. In addition, road safety was considered as another goal, which would be provided by creating green spaces on the highway's boundaries, with regard to the safety principles of a living environment. In this plan, a bus route was provided for urban public transportation network purposes.

The consultant engineers of the plan proposed the following specifications for the Navvab Project. First, the route was to be 5185 metres long, with seven non-level intersections along its length, except at the Tohid Square roundabout. Second, the highway was to be approximately 62 metres wide, consisting of six fast-travelling automobile runways, two margins of green spaces on either side, to a width of 10 metres, and a bus route for both sides, in the west. Third, the rest of the highway's sides, 38 metres, were allocated to constructions around the highway.

Figure 6-1 shows the bridges and non-level crossings, and Figure 6-2 shows the cross-section of the highway.

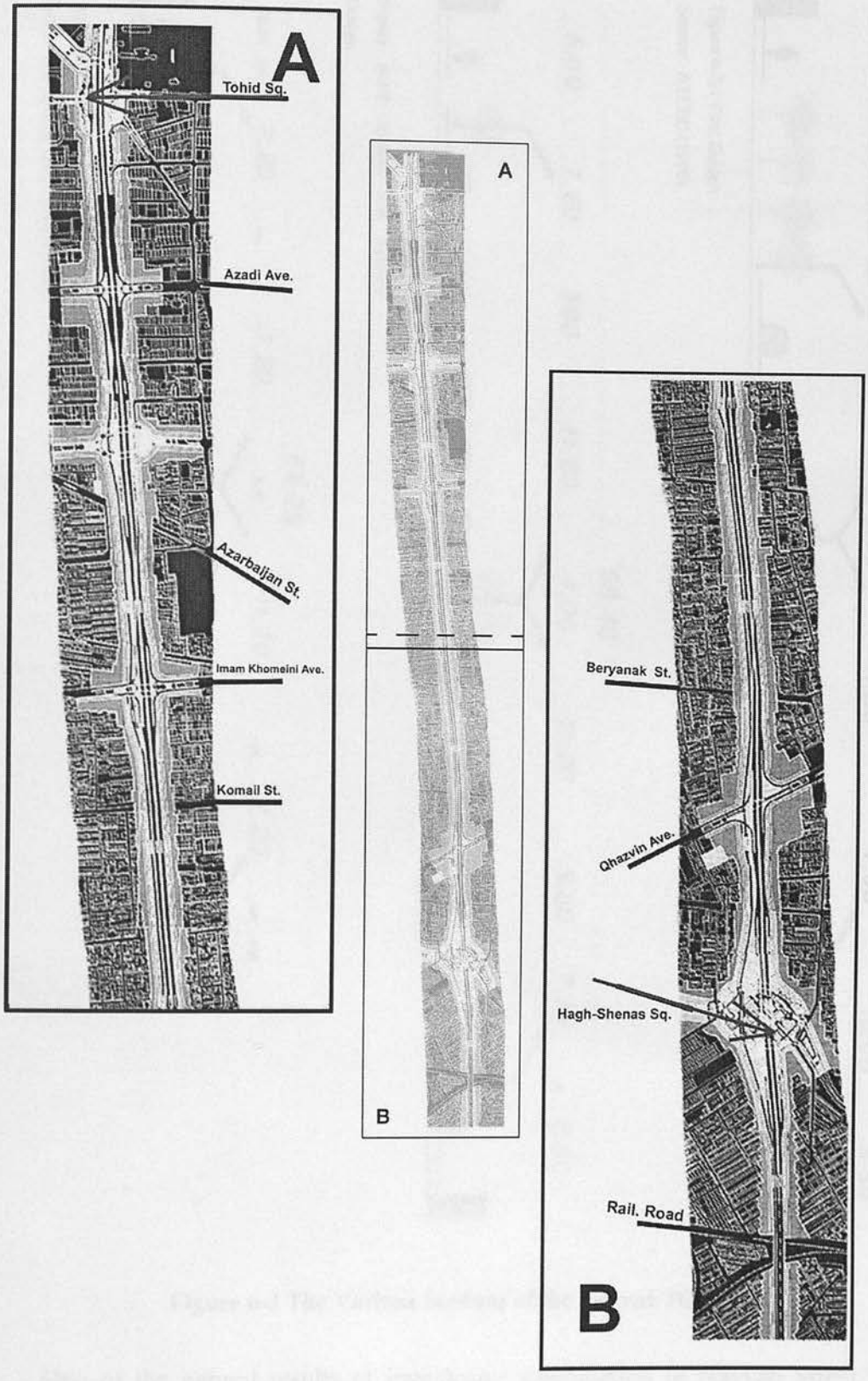

Figure 6-1 Navvab Highway Plan and Its Grade-Separated Junction and Limits of Construction
Source: ATCEC, (1992)

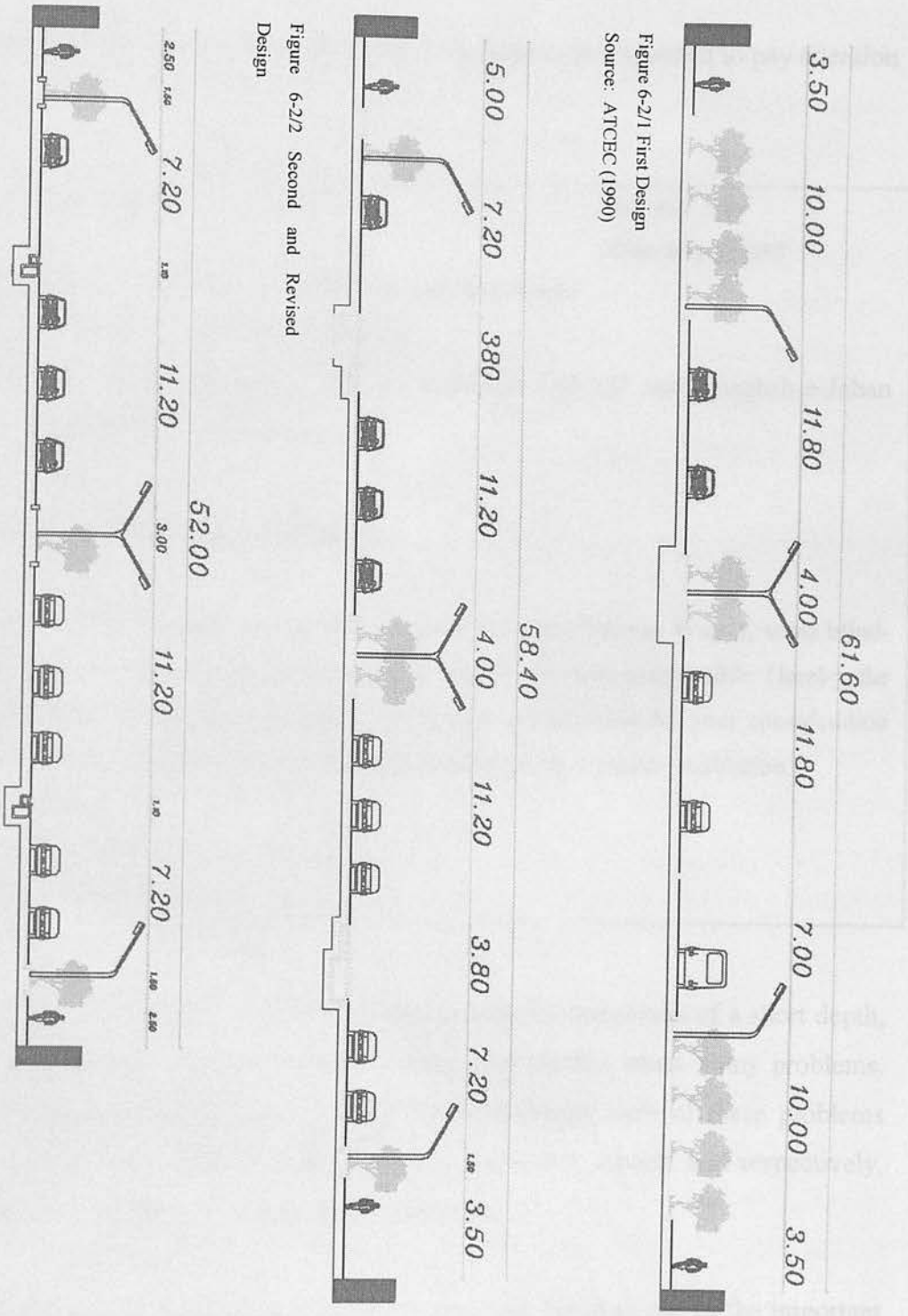

Figure 6-2/1 First Design
Source: ATCEC (1990)

Figure 6-2/2 Second and Revised Design

Figure 6-2/3 Implementation
Source: The Report (Dec.2000), PCROT

Figure 6-2 The Various Sections of the Navvab Highway

One of the natural results of interchange construction in Navvab Street is the alteration to access routes. After constructing the highway, the possibility of integrating various existing minor routes, which make their way from the former Navvab Street, were totally omitted; other access ways should have been created. In

this regard, through a letter, the consultants of the plan were requested to pay attention to this subject:

Tehran Municipality

No.: D-T /348

Date: May 7, 1995

Tehran TadbirBaft Company-TTBC (Private, Joint Stock)

The Respectful Consultant Engineers,

ARCEC, GCEC, BACEC, ATCEC, Sharestan-SHCEC and Nasghsh-e-Jahan Pars-NJPCEC

Subject: Navvab Highway Project

Respectfully, regarding the implementation of Navvab Highway Project, some blind-ended alleys, which previously connected to Navvab St., become inaccessible. Hereby, the project's results during the design work continuation are provided for your consideration and paying more attention to the mentioned problem in order to prepare a solution.

With regard,

Managing-Director

Abdollah Khosravi Kamrani

The idea of constructing a series of linear residential complexes of a short depth, along both sides of a noisy expressway would, undoubtedly, cause many problems. However, regarding the different views of the consultants, each of these problems could be found with different quantitative and qualitative aspects and respectively, they would receive different solutions and responses.

Its narrow width, according to the consultants, was stated as one of the important weaknesses of the project. The initial reports show consultants' eagerness to purchase and possess lands with more width (more expansion in and around properties). However, no response was received from the client. So, the same agreement and the approval of Article 5 from the High Council of Urban Development Commission, based on increasing each side to 27.5 m. (up to the last registered plot), was considered as the action criterion.

Based on the client's previous approvals (Tehran Municipality), the allowable density of the region constructions could be increased up to 500%.[6] Although, regarding the urban development considerations in order to create a healthy environment, the density suggested by various consultants was 250% at most. However, through the calculations related to the required foundation in providing housing for the previous population that had lived in the destroyed units, which were surveyed by the main consultant engineers (ATCEC), the maximum density was offered equal to 370%.[7] In calculating the required foundation for residential units (except the existing units in the area), government policies related to housing compensation were considered as the criterion in a way that, according to the national goals, the average for the area of a residential unit was estimated from 70 to 110 square metres (in a changeable form).[8]

In the primary studies, the main consultant engineers (ATCEC) and other consultants implied service deficiencies, especially the public services with no income and no balance in space uses, also the excess of trading uses or industrial workshops and little therapeutic services, little recreation and sports places and green spaces in the region. However, constructions around the highway, except for the residential dominant use, mainly included administrative and trading uses.

The physical design programme, which itself was influenced by the client's financial policies in providing the total route's cost by obtaining profit from selling the constructions and the plan requirements, was based on housing equal to the number of units destroyed during the implementation of the project, caused the land area to be occupied totally. Therefore, it stopped the horizontal expansion of the profit-making plan.

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[6] Despite the fact that decreasing the density of high-density districts of Tehran, particularly districts 10 and 11, one of the main aims of Tehran's comprehensive plan was to provide more space for public services activities, 1969.

[7] ATCEC (1990), the feasibility report of Shahid Chamran Highway continuity project, Vol.2.

[8] Ibid, with reference to second social, cultural and economic development plan of Islamic Republic of Iran.

According to the consultants, the required foundation for constructing residential units, considering the required land for constructing the highway and intersections, regarding life values, these types of buildings are still the best form of residential structural forms[9] when constructing real estates and units. In addition, according to existing bounded lands for high density, allocating independent open space to residential units also seemed impossible. Therefore, it was concluded that the only possible pattern was a residential apartment pattern, where the main spaces would be in the form of several-storey blocks and the required open spaces in the form of common spaces between the blocks.

According to the proposed design by one of the designers from the consultant engineers, these blocks, which by nature were not appropriate for big urban blocks, should be built on an ordinary and human scale. Therefore, their form should be designed as the completion of various urban environments,[10] not as separated and divided residential complexes. As a result:

1- Their size, volume, form and compounding characteristics were the creating tool and stating mean for urban public spaces.

2- It can institute logical urban relations, directions and connections among public spaces, by designing logical forms and sizes of urban and constructional blocks under the impression of existing urban typological orders, to offer more healthy relations with the inhabitants' emotional needs, who are living in the existing structures or those who will occupy new blocks in the future.

The subject of sound pollution, the result of heavy traffic jams on the Navvab Highway imposed negative effects on side-buildings, attracted the attention of consultants. The required solutions and prohibitions were set and presented as follows:

[9] ACEC,ATCEC, their planning report (quoting the concepts)

[10] ACEC (1992), planning theory for construction projects of Chamran Highway.

- The distance between traffic location and the constructions should be lengthened as much as possible;
- The buildings' direction should be selected in such a form that their windows and main sides would not face the highway;
- The buildings along the highway should be extended, by using sound obstacles such as walls, fences, panels, etc. in the locations in which the extensions were made;
- The back stairs between the floors should be created to lessen the highway's sound and air pollution side-effects, especially on the higher floors;
- The spaces of the buildings, should be separated which would be less sensitive to the sound; locating them adjacent to the sound source;
- Double glazed windows should be used;
- Sound insulation material should be used in the final structural layer and balconies;
- Some structural and installation arrangements should be prepared.

After surveying the effects of wind in carrying sound and dirt, in particular, the west-east direction of the wind in Tehran and the fact that dust is attracted to the east side, the following suggestions were made:

- On the building sides which will face the fore-mentioned directions, no open space in the wall would be used.

- In order to prevent the absorption of dust and harmful gases and to produce more oxygen, the existing trees could be used.

Regarding the existing buildings adjacent to the new constructed buildings, especially the problem of different appearances, it was suggested that at the higher floors, in proportion to the lower floors, some set-backs should be considered.

Because of the total volume of the construction blocks, concerning the scale and urban spaces related to their being adjacent to streets, and the existing conditions, these blocks should be designed in harmony with the existing structures. In addition, in selecting a structural form for the residential complexes related to the complexes' goals, it should be presented according to a greater urban environment. Therefore, in order to modify the existing height difference between the new buildings and the existing constructions, it was suggested[11] to lessen the number of floors and to avoid high and heavy volumes, for environmental reasons, therefore, the adjacent units impose little disturbance (Figure 6-3).

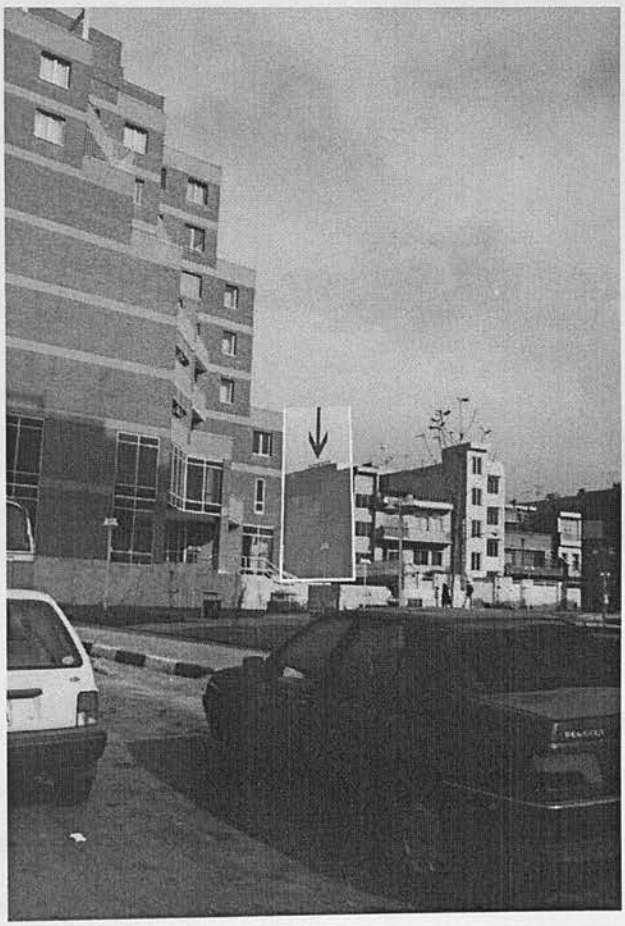


Figure 6-3 New Construction Bordering the Old Context – Neglected Lands and Spaces
Source: The author, April 2002

[11] ACEC (1992), Planning theory for construction projects of Chamran Highway.

Regarding the low quality of the old constructions and the few well designed buildings during the last three decades, keeping none of the buildings in the region seemed necessary. Therefore, the consultants felt no obligation in this regard. In addition to the above issues, one of the consultants suggested to use semi-open spaces like balconies and terraces to keep flowers and plants and to bring light to the closed dark public corridors (Figure 6-4).

Figure 6-4 New Construction Bordering the Old Context at the Side of the Highway at an Intersection with Local Streets
Source: PCTAC

The provision of parking lots was suggested by different consultants and resulted in different solutions. First, ATCEC suggested constructing public parking lots, multi-storey, in different locations outside the construction boundary, which would be constructed at an acceptable distance from the related residential units. Nevertheless, the fore-mentioned plan for the parking lots was not economical. Other designers like Banian Consulting Engineers Company - BNCEC, Arcolog Consulting Engineers Company-ARCEC, ATCEC and Tarh-o-Abadi Consulting Engineers Company-TACEC foresaw the design and construction of the parking lots inside the buildings, in the basement.

Regarding the complex facade, two facades were considered: the façade, which faces the highway, the façade, which is against the existing residential buildings. The former it was suggested, should be constructed as surfaces with big divisions having horizontal lines. Sometimes, they could be crossed by the vertical elements, to prevent the monotony of adjacent residential areas and in contrast with the old constructions. It was suggested that the facades should be more subtle and motivating. One of the consultants ARCEC, used medullar systems in its designs and studies, and another, TACEC, prepared a brief implication about these systems.

Concerning the space uses, residential, trading and administrative units, the 4–8 storey residential blocks were considered to be located between the junctions on both sides of the highway and trading/administrative towers; the 18-19 storey residential blocks were located at the corner of the intersections and junctions or inside the squares (Figure 6-5).

The complexes located in one side of the highway, were offered a connection through the pedestrian route which was located along the highway. The ground pilots and the new complexes' access was located at the back of the building, neighbouring the residential areas. The access way between the two sides of the highway was to be through aerial public pedestrian bridges (Figure 6-6) and private roundabout underground passages. BNCEC, through designing roundabout underground passages foresaw the access way for the trading, administrative and cultural complexes to be located at the four corners of Hagh-Shenas Square.

Figure 6-5 The Combination of Administrative and Trade Units Adjacent to Residential Units
Source: The author, April 2002

Figure 6-6 Pedestrian Bridge and Connection between Modern Constructions on Both Sides of the Highway
Source: The author, April 2002

ARCEC, has undertaken many studies,[12] about the sitting of the new and old constructions in the Navvab Project, and has found some solutions. According to the primary principles of urban design, new buildings should only be constructed by considering its round area and constructions. Therefore, created spaces, whether the space connection or urban forms occur, can prevent improper connections between new volumes and existing ones in the urban atmosphere. The connection and co-ordination between new complexes and urban spaces will deal with danger.

ARCEC predicted that physical and subjective differences between the new structures and the old buildings would be unavoidable; therefore, it suggested that a kind of connection in the old and new spaces' section should be considered to prevent the differences created by the physical differences and the danger of their conversion to social separation. In addition, in order to use the available opportunities for the region's urban life, it was suggested that the public and semi-public spaces of the existing constructions, which are connected to the new structures, should be developed and renovated. Therefore, in order to alternate the location of these two different constructions, the upper floors should be retreated at the backside of the highway, through the consultant engineers' plans (Figures 6-3, 6-4 and 6-7).

6.1.2.3 The Years After 1991

During 1991-92, the main body of the plan dealt with several alterations such as the highway and/or structures and construction on either side. A survey of the studies and designs of the consultants indicates several difficulties, which the consultants had to deal with. They searched for solutions to important problems such as access ways, providing parking lots, etc.

According to the client's view, the residential and trading units' access ways through old and destroyed structures have created some difficulties in the units' sale and decreased their real value and price. Therefore, the client, Tehran City Renovating

[12] ACEC(1993), reconstruction planning of Navvab highway surrounding (part 2 west side)

Organisation, was offered some suggestions, which resulted in basic changes to the highway and its boundary.

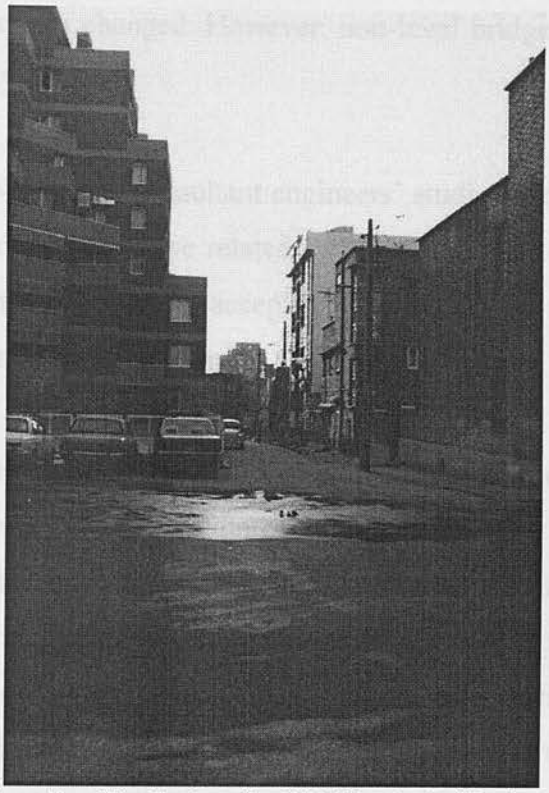


Figure 6-7 New Construction Bordering the Old Context –Neglected Lands and Spaces
Source: The author , 2005

The client has agreed that on this highway, low-speed lanes should be designated, in both directions, along the high-speed lanes, so that:

- Buses can pass along the low-speed lanes in both directions; the designated special bus lane at the west side of the highway can be omitted;
- Residential, administrative and trading spaces' access would be by car and other public transportation means, which again, would use the low speed lane.

Residential and administrative complexes, with no direct access to the highway, have undergone a design criterion alteration. This provided a solution to the access problem through the inner parts of the old area, provided access to the highway and separated the old and new structures from each other.

By adding two low-speed lanes on both sides of the highway, a special bus lane and the marginal green spaces around the highway could be omitted. In addition, the highway cross-section was changed. However, non-level bridges and crosses exist as they did in the primary design.

The author's survey of the consultant engineers' studies and designs during these years has shown no difference were related to the studies and designs of the former consultants except for the previously accepted area, which was reduced from 70–110 square metres, with an average of 86 m^2 to 45–75 square metres, in average, 70 m^2.

The medullar designs of the buildings of all the consultant engineers was studied by the author concerning the modulation of the buildings' uses and for approving all types of structural industrial systems (for the fore-mentioned buildings' quality, being sensitive to the on-time capital return and the required speed for the projects on such a scale). Based on these studies, each of consultants with their special viewpoints extracted different measures, based on which, their design order modification was established. For example, ATCEC selected and applied 1.20 m. medulla, Bavand Consulting Engineers Company-BACEC Consultants 4.20 m. medulla and ARCEC 1.50 m. medulla. It was suggested the required parking lots for the residential and trading units should be located mainly in the basements and ground floors, while in some places; there would be open spaces for public parking lots, close to the related public structure. The number of parking lots also was calculated, based on 30%-40% [13] of residential units.

Mainly, the structures were envisaged with no connection to the old structures, therefore, the low quality constructions and the aged buildings around on the one hand, and the plan volume and height of the buildings on the other hand, can convert the fore-mentioned issue to an effective factor for confronting with executive problems.

[13] ATCEC and BACEC provided 30% and ACEC provided 40% of the parking units

The presented designs show that, regarding the constructions around the highway, mainly, the specific boundaries were paid attention to, designed multi-storey apartment complexes, with walls on both sides of the axis (the cut axis from the structure located at the back of these constructions). In order to provide new constructions, with the old constructions in the background, a design for some passage spaces connecting the Navvab axis and the existing streets in the area, was considered; it was designed in a very local way and separated from it in a way that it could not disturb the independency of plan spaces.[14]

At the beginning of the designing stage, the proportion of applications distributed was considered as 30% trading and administrative, and 70% residential; but as the designing path progressed, trading and administrative applications found more importance (at least quantitatively). According to the client's view, "the existence of low speed lanes and the mobile space around it obliged the necessity to build trading constructions and shops on the ground floor and creating passer-by in the pavement of low speed lanes will excel the residential and trading units' sale and bring more profit". However, regarding the consultants' view, these trading units could meet the daily requirements of its habitants; the ground floor and sometimes the floors below the ground (for proper usage from different levels) were allocated to this matter (Figures 6-8 and 6-9).

The administrative and trading spaces, which included mixed applications, were designed in the form of a mixture of administrative-trading offices and small workshops. These spaces were foreseen in the form of separated blocks or in residential blocks (with independent accessibility). Establishment of these blocks was mostly formed in main knots and crosses of the design limit with economical explanation of specifying the land in the form of high blocks of 17-19 stories[15] (Figures 6-5 to 6-10).

[14] ATCEC (1993) Construction planning of Navvab surroundings, p.12

[15] BACEC (1997), special project for Navvab surroundings.

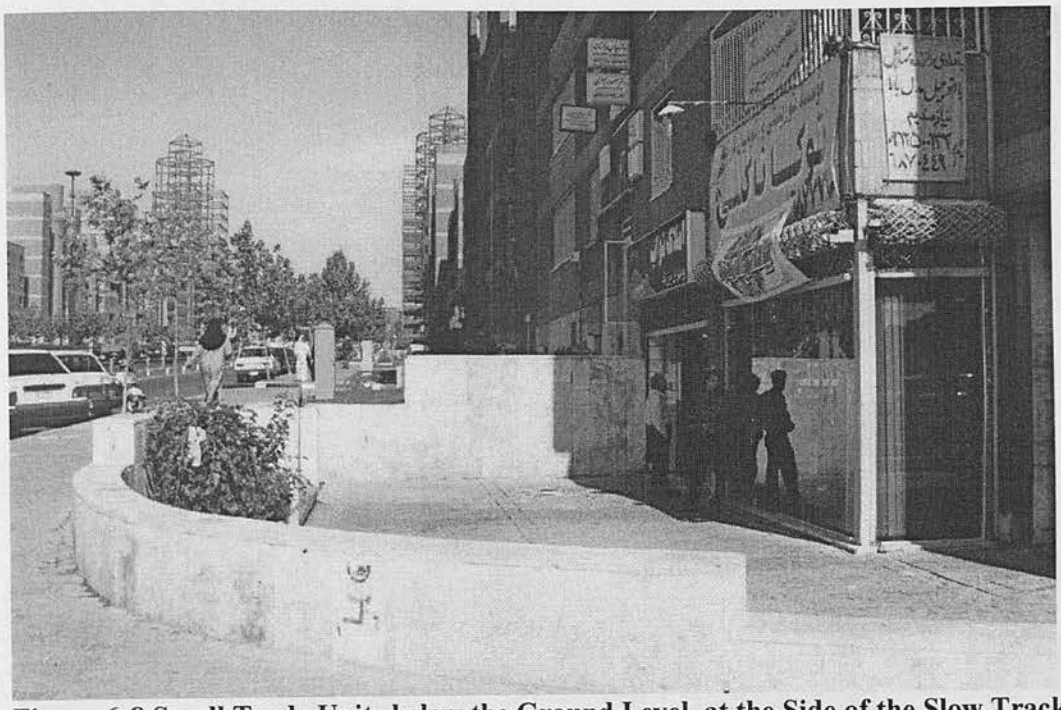


Figure 6-8 Small Trade Units below the Ground Level, at the Side of the Slow Track and New Construction
Source: The author, April 2002

Figure 6-9 A Traditional Tea-Shop on the Ground Floor
Source: The author, April 2002

Figure 6-10 New Construction Bordering the Old Context – Neglected Lands and Spaces
Source: The author, April 2002

However, the design of the Bazaar Bridge and the design of the central square or platform, which were presented by some of the consultant engineers, with the purpose of motion and motivation and making them attractive, included its trading spaces. The presentation of these designs, the result of a series of common meetings, which the client continuously demanded and in the presence of the consultant engineers of the plan, was carried on for the purpose of the exchange of views and co-ordination of the designs with each other.

The connection among complexes on one side of the highway could be formed through the ground-floor pilots, where they have been foreseen in trading locations. The pavements would be located at the highway's margins, which occasionally, in the form of straight markets or porches, connected trading spaces to each other, through the passing routes behind the complexes, adjacent to the existing structures. However, the connection of the complexes on both sides of the highway, for the existence of the city highway and heavy travel of automobiles on it, seemed more complicated and difficult. The complexity and the difficulty was important, not only from the physical accessibility aspect, which can answer the requirements of specific situations, but also

in that such an availability can increase the capacity of the travelling path and the connection of both sides of the highway through presenting attractive and live public spaces. Finding a solution motivated the consultants to design plaza platforms and bazaar bridges. Previously, such designs had not been used in state urban designs, at least in Tehran.

Bazaar bridges' design was formed in this way: they were settled along the drivers' path, on the bridges of crosses, which did not have the same level, between the trading units with separated availabilities on the highway, and perpendicular axis to it that was fulfilled parallel to the travelling direction of the automobiles on the bridge. The existence of these trading units could change the monotony of the travelling path and direct people to these units by creating various public spaces (Figure 6-11).

Figure 6-11 Bazaar Bridge
Source: The author, April. 2002

Platform and plaza designing were the elements, which provided access for pedestrians to the markets on the ground floor. In this design, the highway and its attachments – such as low and high-speed paths - were constructed in the form of an

under-passage so that people could reach both sides of the highway and the settled complexes without using bridges or underground passages. The mentioned central square also was surrounded with trading units and public spaces so that could take advantage of pleasantly created spaces (Figures 6-12 and 6-13).

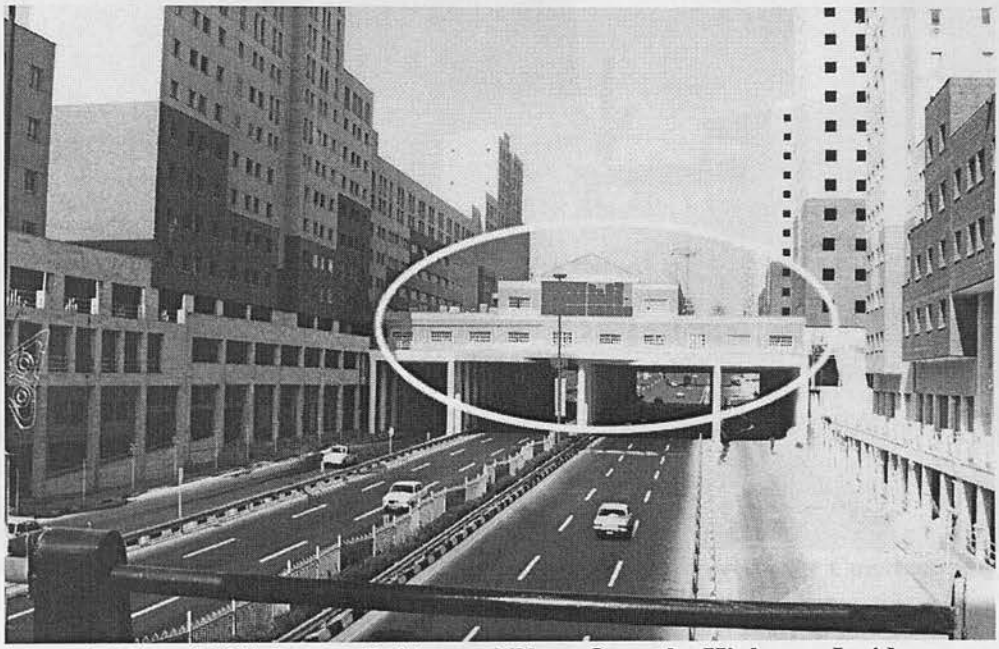


Figure 6-12/1 Bazaar Bridge and Plaza Over the Highway, Inside
Source: The author, April 2002

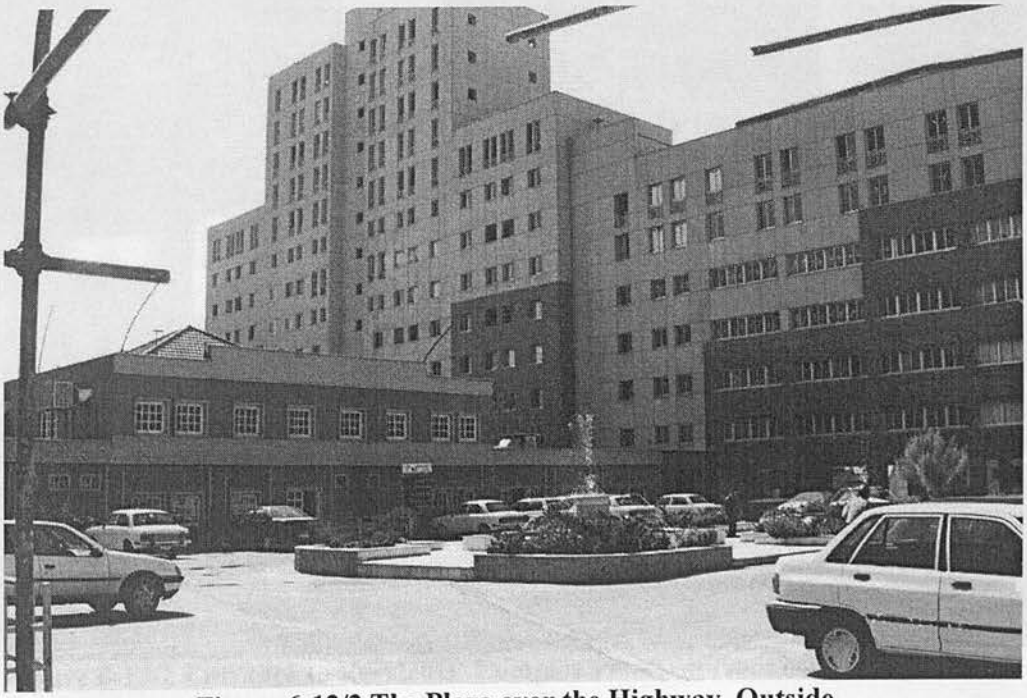


Figure 6-12/2 The Plaza over the Highway, Outside
Source: The author, April 2002

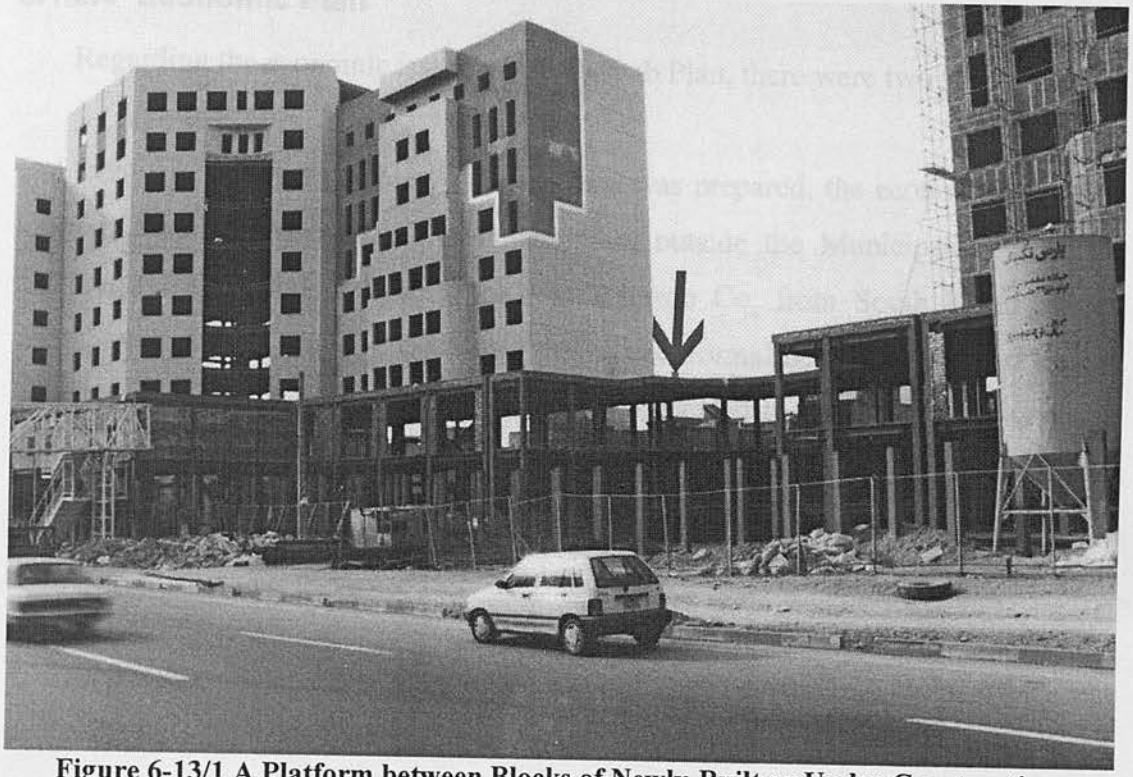


Figure 6-13/1 A Platform between Blocks of Newly-Built or Under Construction, Entrance from the Slow Track
Source: The Author, April 2002

Figure 6-13/2 Entrance to Residents' Complex Platform from a Thoroughfare of the Navvab Highway
Source: The author, April 2002

6.1.2.4 Economic Plan

Regarding the economic issues of the Navvab Plan, there were two stages:

1990-92: When the primary physical plan was prepared, the economic plan was formed, based on attracting investments from outside the Municipality, even the investment of foreign companies such as Daewoo Co. from South Korea, which finally with Social Security readiness, the related formalities were fulfilled and an agreement was signed (no related document was handed to the author). However, as this organisation despite an exchange agreement, refused to pay up to 50 milliard Iranian Rials, which was agreed upon the agreement of the mentioned organisation considered cancelled[16].

After 1992: When investment in the form of the first way was not possible, new economic plans appeared which finally resulted in selling Participation Papers.

The plan for providing the required project costs was estimated based on the following resources:

- Constructional budget of Tehran Municipality
- Participation Papers' sale
- The pre-selling of the building units (residential, administrative and commercial uses).

The sales plan of Participation Papers, was predicted to be completed over two years and in a six-month period, for 10 work days all over Iran. Financial cash-flow estimation was made, based on a few theories, one of which was to take action in pre-selling the building units, from the second year of implementation of the plan, in such a way that 40% of the units had be sold in advance in the fore-mentioned year and the remaining 60% in the third year. It was foreseen to pre-sell in a way that one-half of each unit price should be taken at the time of making an agreement and the remainder

[16] TDDTM (1994) Navvab project feasibility report, pp.2-3

would be taken at the time of delivery. At that time, the cost for executing the plan was predicted to be 475 billion Iranian Rials, which included the cost of purchasing deeds, structure destruction, around constructions, highway and bridges' construction and all the availabilities plus all its lateral expenses. In addition, the profits from the Participation Papers' sale and their publication, was estimated totally as 170 milliard Iranian Rials, plus the cost of plan implementation, was 645 milliard Iranian Rials[17].

The repayment plan for the original amount and the profits of the Participation Papers was Tehran Municipality's responsibility and its payment guarantee was care of the National Bank of Iran (Bank Melli). Under Article 31 of Executive Instructions of the Participation Papers' distribution rules and regulations and Article 15 of the agreement signed between Tehran Municipality and National Bank of Iran, if before Participation Papers due date, all the Navvab Plan properties were not sold, the Municipality had to purchase the unsold properties itself at the day price. Therefore, the Municipality could execute the responsibility based on the repayment of cash receivables from Participation Papers and the accruing profits.

The residential, administrative and commercial units' sales income, based on the 1991 price, was an estimated total of 681 billion Iranian Rials, which after deduction of total project costs, 645 billion Iranian Rials, would be equal to 36 billion Iranian Rials as the net profit resulting from the project implementation. Although the profit-making plan was about to pay 20% profit to the participants, it was not specified from which source this profit should be paid.[18]

6.1.2.5 Management Plan

In general, the predicted plans in the management domain should be surveyed for three periods:

[17] TDDTM (1994) Navvab project feasibility report. pp.2-3

[18] Ibid.

1- When the project's financial ensuring plan was followed by foreign investments, "Technical and Construction Deputy District of Tehran Municipality" was considered as the executor and administrator of the project.
2- When the project financial ensuring plan was about to be fulfilled, through public and private organisations, outside the municipality, like Social Security Organisation, managing the plan was predicted to be the same as following. The project management on a huge scale was the responsibility of the "Technical and Construction Deputy District of the Municipality"; the responsibility of project planning and supervising its implementation was one of the responsibilities of the "Tehran City Technical and Engineering Consultant Organisation"; "Tehran City Engineering and Constructing Organisation" also undertook contracting responsibility plus project implementation.
3- Simultaneously with the last offered economical plan, which was based on providing financial costs of the project through people and in the form of Participation Papers' sale, the managing plan was formed in such a way that an institute should independently undertake the project achievement and implementation.[19]

According to the idea which existed for the project management, in the management plan also (despite all the alterations that took place in it) the decision making institute was the Technical and Constructional Deputy District, and the decision path was fixed on the basis of taking advantage of the following organisations and institutes:

- Tehran City Technical and Engineering Consultant Organisation, which had an expertise role in architecture and urban developing affairs, was considered as the co-ordinator and leader of the consultant engineers and plan providers (on decision-making issues).
- Tehran City Engineering and Constructing Organisation was foreseen as the project implementation administrator, which, through taking advantage of the

[19] TDDTM (1994) Navvab project feasibility report, pp.2-3

executive power of the private sector, should administer the manner and amount of their interference in the project execution.

- The High Council of Plans Approving and Surveying, which because of plans offered by the selected consultants of the project, undertook their coordination and their plans' approval. This Council, which was one of the sub-committees of the Technical and Constructional Deputy District, in addition to plans comparing urban development rules and regulations, should declare its expert advice for ensuring the project client's views and after solving existing problems and deficiencies through the plan, providers should take action in getting their approval.
- Tehran Specialised Council - TSC.[20]
- A reliable system, for supervising the Participation Papers' income generation was considered, to predict and decide the financial resources' provision, through the Participation Papers' sale and banks involvement (Central and National Banks) in this project's implementation in the form of an auditing organisation, independent of the Ministry of Economic Affairs and Finance, as the honest and supervisory body, to continuously control the project's implementation and the use of the Participation Papers' income. The fore-mentioned system should supervise the implementation of "instruction, containing regulations for the supervision the participation papers' distribution" and "the agreement signed between Tehran Municipality and National Bank of Iran as the agent". This organisation should publish a report of the financial and executive actions of the project plus its progress after the confirmation of the Central Bank of I.R.; in addition, it should inform people through inserting advertisements in newspapers with a wide circulation.

6.1.3 Implementation and Performance

The time for starting project executive activities, was fulfilled in the last years of 1360s (1981s) (after approving the plan of widening Navvab Street) through the destruction of the deeds located at its edges (with a wide of 40-45 metres). But, since

[20] Appendix III.

the beginning of the 1990s, and the restart of the Navvab issue, the executive affairs of the project were begun in a thorough manner through purchasing the deeds around Navvab Street by the Tehran Municipality and their ownership and then destruction.

Despite the importance of the time factor in investment and correspondingly in the economic success of the project, several delays occurred in different processes of the design and execution (about one year and then a delay of 2 years in the middle of executive operations). However, according to the predicted period, the project was to be completed at the beginning of 2000. At the start of 2000, the work progress was estimated as 60 per cent.[21]

Project phase allocation during project implementation was followed as it had been allocated at the preliminary stages of the plan by the original consultant engineers (ATCEC) and based on highway utilisation.

The Navvab Highway path should be continued to a length of 5529 metres and started from Tohid Square (formerly Kennedy) following Shahid Chamran Highway (Park Way) and on to Ghaleh-Morghi Garrison. The length of this path was divided into 5 phases:

First Phase: Azarbaijan St. to Imam Khomeini St.,with a length of	793 m.	850 m.
Second Phase: Imam Khomeini St. to Sina St., with a length of	1015 m.	980 m.
Third Phase: Sina St. to Helal-e-Ahmar St., with a length of	1180m.	1175m.
Fourth Phase: Helal-e-Ahmar St. to Ghaleh-Motghi Garrison, with a length of	1401m.	900 m.
Fifth Phase: Tohid Sq. to Azarbaijan St., with a length of	1140m.	1280 m.
Total	5185 m.[22]	5529 m.[23]

[21] Adapted form the report of PCROT.

[22] Source: The report (Dec.2000), PCROT.

[23] ATCEC (1992).

Implementation and construction of the highway was started with a location delay of about 1140 metres from its real beginning point (along Shahid Chamran Highway from Tohid Sq.) and the executive operations of this area were postponed till the last stage (Fifth phase).[24] Figure 6-1 shows a general map of the highway and Figure 6-2 indicates its cross-section.

Comparison of the cross-sections of the design and execution stages indicates that at the implementation stage, more than 10 metres were reduced from the highway's width proportionate with its design; such a reduction also applied to the middle green spaces, and the width of the pavement.

After the highway implementation, when the first, second and third phases were completed, public transport started using it (Azarbaijan junction to Helal-e-Ahmar junction). Afterwards, the complete implementation of each four-part section of the Navvab Project was completed in nine operations. It started from the stage of project land purchase, and ended with the units' completion and their distribution (Figure 6-14).

Time scheduling of construction of the Navvab Highway edge, from the point of deeds purchasing, up to units' sale and their delivery in 4-plot projects, together with a time report for the activities undertaken to Sept. 21, 1997, can be seen in Figure 6-15 (the copy from the report of project progress on May 31, 1998).

[24] Despite the studies and planning for this area, this phase does not have an approved plan.

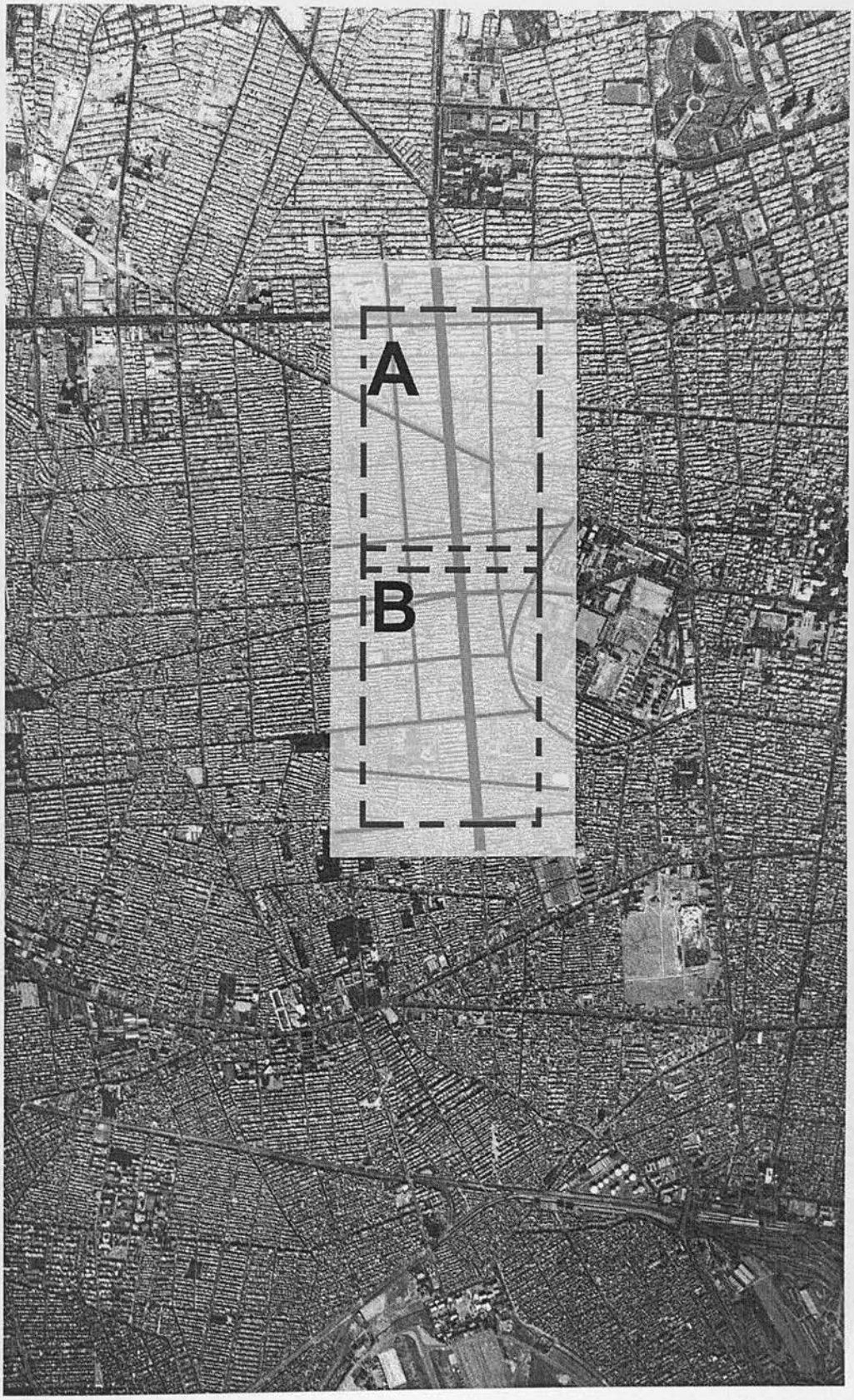


Figure 6-14/1 Indicator of Aerial Photography of the Navvab Highway and Surrounding Context after the Inauguration of the Operation
Source: N.C.C.I (1989)

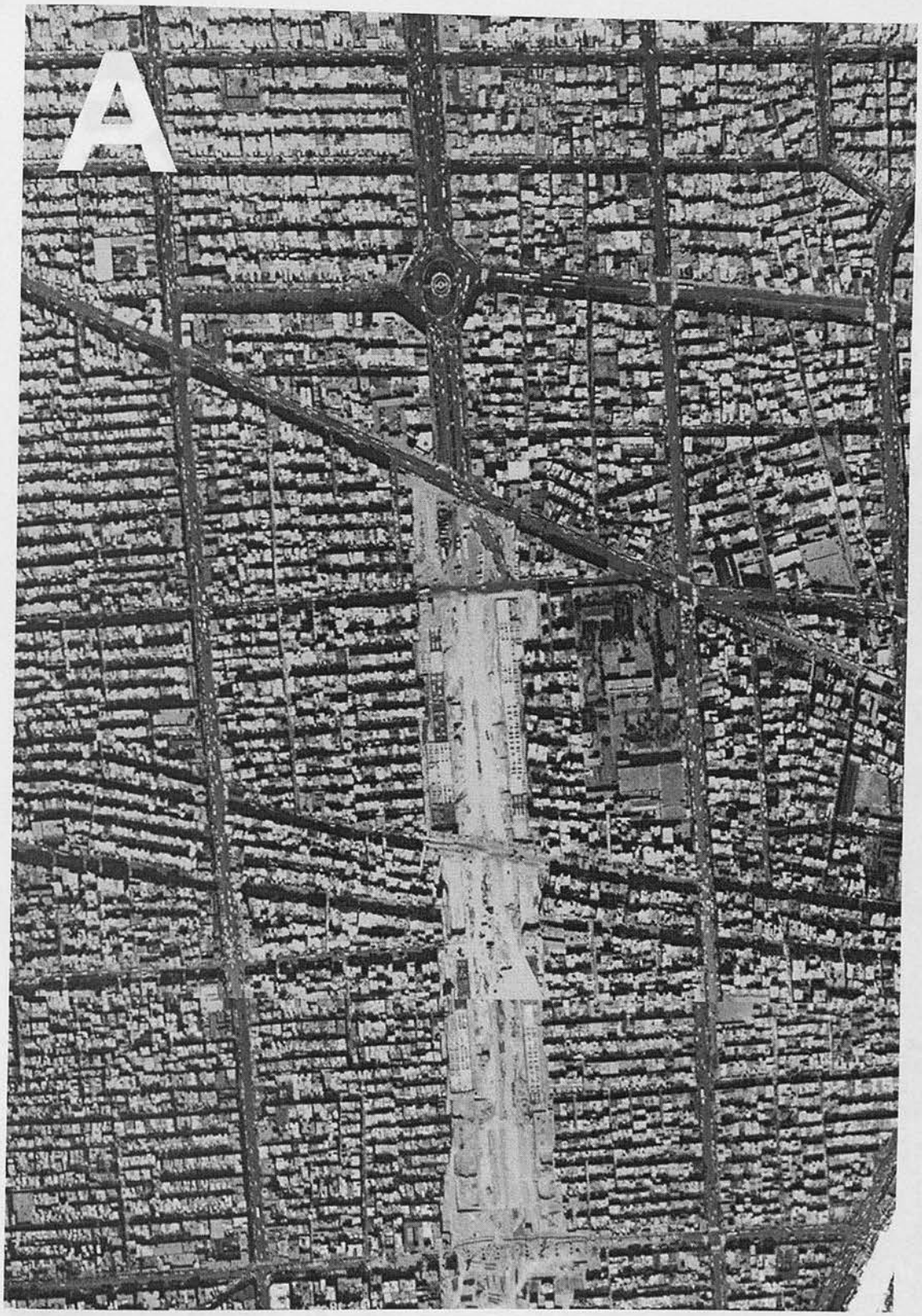


Figure 6-14/2 Aerial Photography of the Navvab Project in Operation Part A (1995)
Source: N.C.C.I, (1995)

Figure 6-14/3 Aerial Photography of the Navvab Project in Operation Part B (1995)
Source: N.C.C.I. (1995)

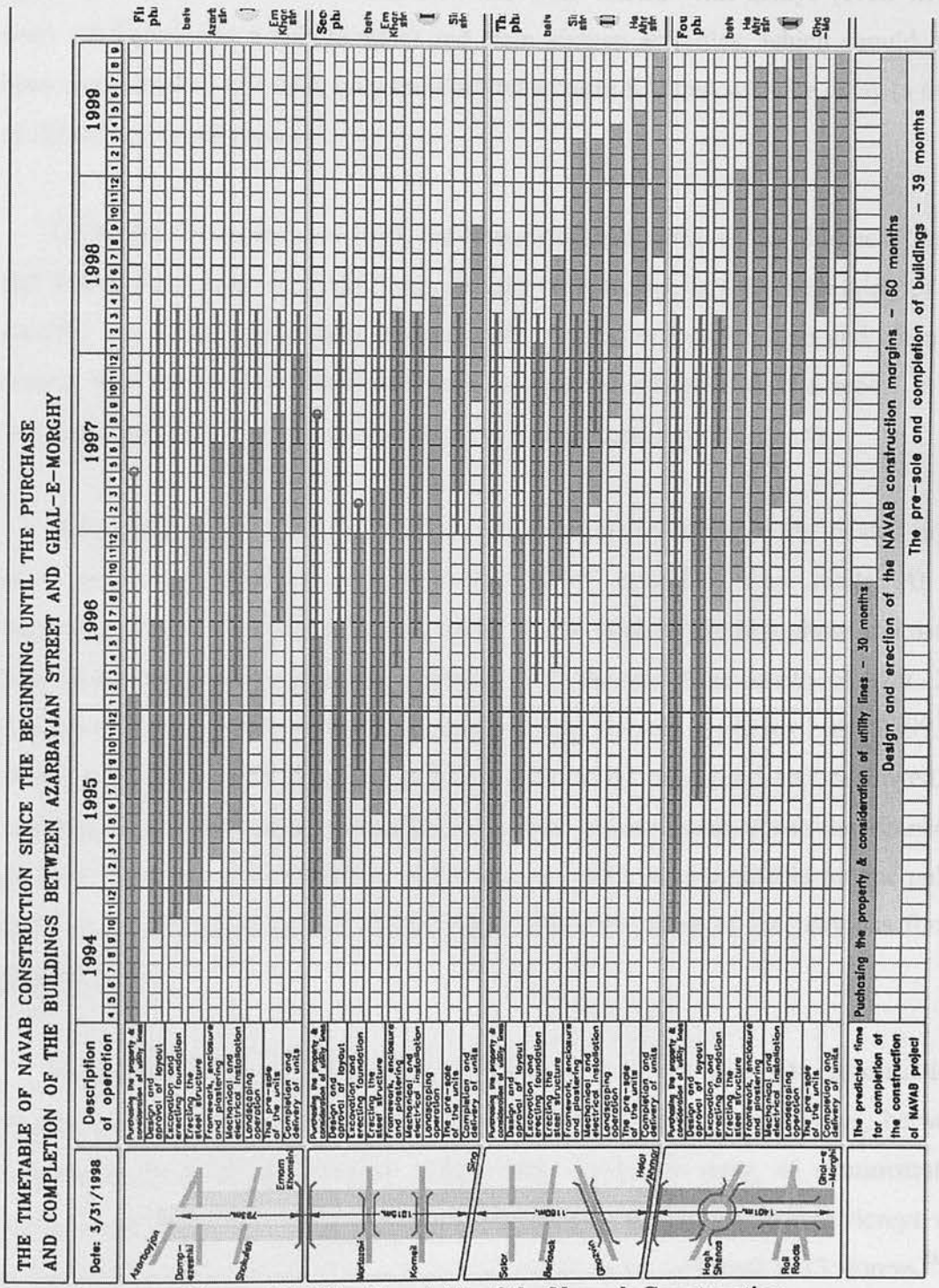


Figure 6-15 The Timetable of the Navvab Construction

Source: PCTAC, (Monthly Report, June 1998)

As can be seen in the fore-mentioned table, until the date of presenting this report (May 31, 1998) from thirty-one activities, still six activities had not been started. Ten activities had been started by the determined date and three activities were begun

before the specified date. Twelve activities were started with delays (even with a delay of fifteen and a half months) and from sixteen activities, which should have been completed by this date, only three activities were fulfilled with the delay (a delay of fifteen and a half months).

Up to the first months of 1998, the fore-mentioned tables of the "Project Control and Information Unit of TASC" reports can be seen through the beginning of the monthly and continuous project reports. After a halt in executive stages and when the project was restarted in 2000, there can be seen no effect of such a report in the "Project Control Centre of Tehran City Renovating Organisation" reports.

According to the project allocation phase, ownership of the lands located in the street (highway) widening and the constructions around it were made. At the beginning of project implementation, almost all the lands of the first phase and nearly 30% of second phase lands were purchased. Up to the end of the month of Azar 1379 (December 2000), 100% of the deeds and buildings located at phases 1 and 2, 99.7% of the third phase and 98% of the fourth phase were purchased and destroyed. In addition, from a total of the former buildings with different uses, it was determined to preserve three mosques (only the public spaces, which were available for the public and private institutes) located at the fourth phase, the same as the previous form[25] (Figure 6-16).

Figure 6-17 shows the foundation surfaces of different uses. The constructions around the highway with an area of more than 1 million square metres, between Azarbaijan St. to Ghaleh-Morghi, include 5841 residential units, 45 administrative and commercial units were allocated for construction and the number of storeys was at least one to a maximum of 19 storeys, but mainly they considered 8–13 storeys.[26]

[25] ACEC (1992), Planning theory for construction projects of the Chamran Highway.

[26] The report (Dec. 2000), PCROT.

Figure 6-16 Mosque (as a Public Realm) That Has Been Imposed to the Project
Source: The author, April 2002

The main frontage of these constructions looked to the highway and almost all the internal spaces got light from these directions. Surveying the constructions indicates that no provision had been made to counteract the highway traffic, such as double-glazed windows and walls with sound insulation.

Complexes' entrances of a very simple and common composition were formed along the highway (Figure 6-18).

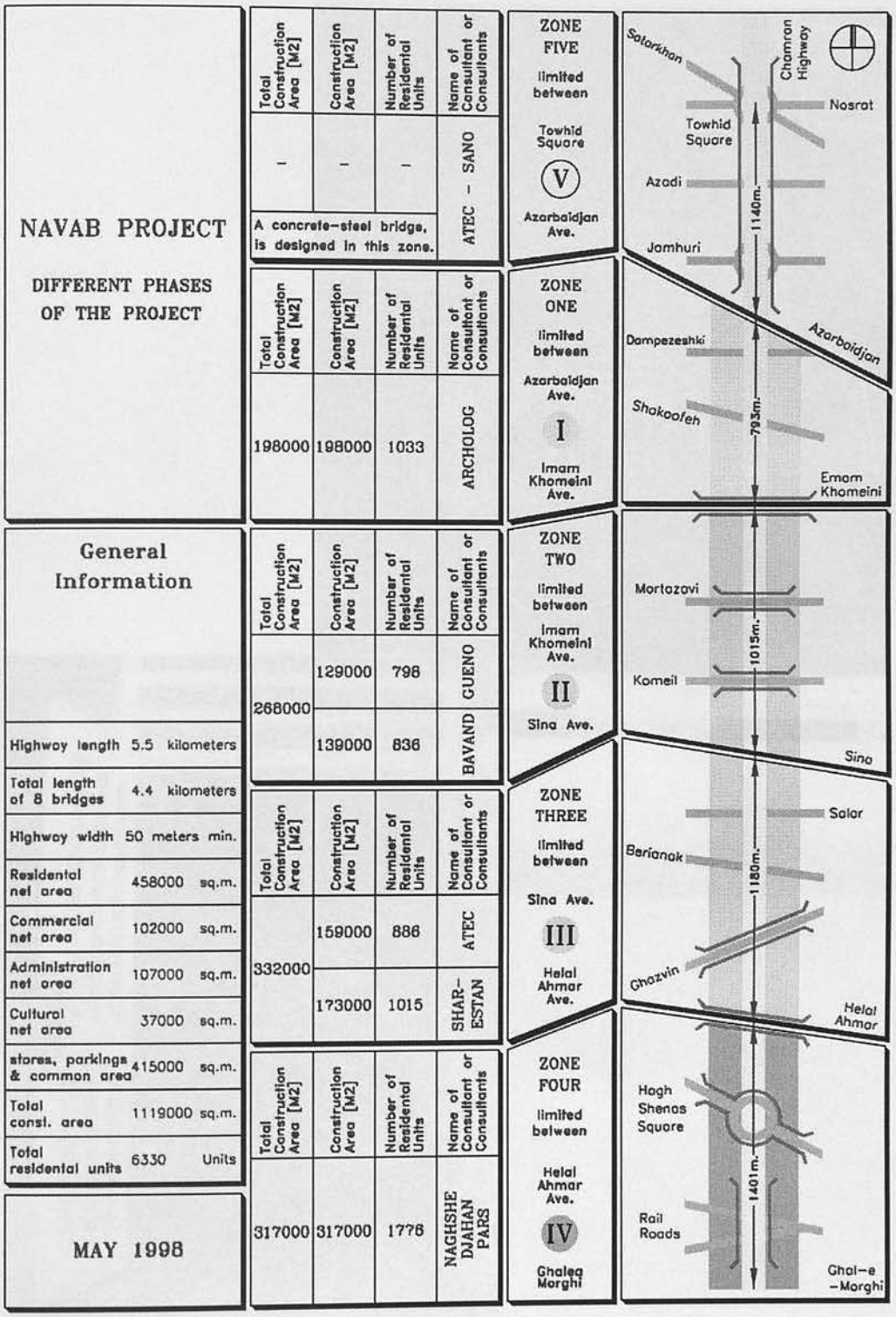


Figure 6-17 Specification of the Navvab Project
Source: PCTAC, (Monthly Report, June 1998)

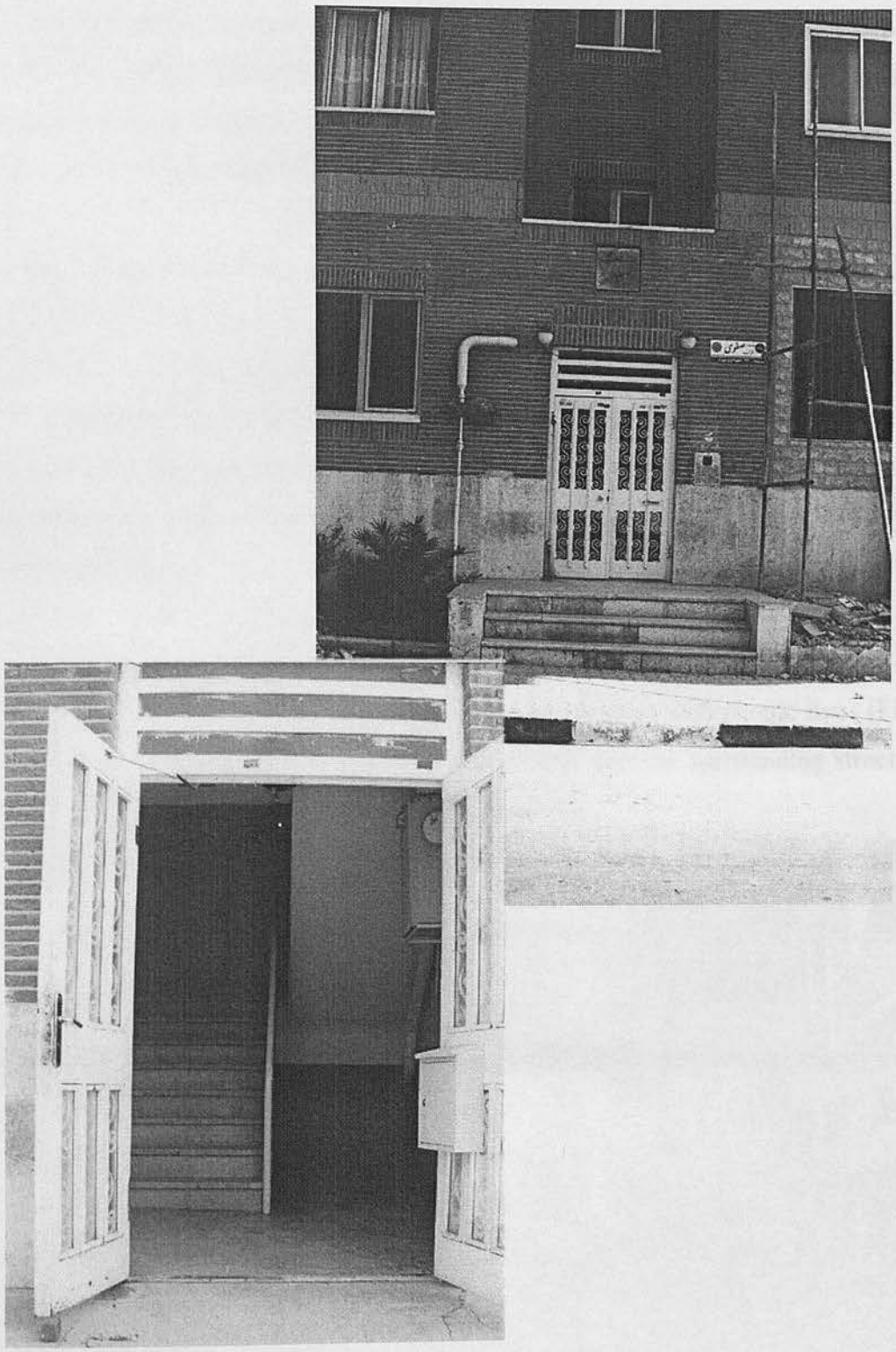


Figure 6-18 Residential Complex directly From the Thoroughfare to the Complex Staircase
Source: The author, April 2002

The partitions, foreseen in the design stage to cope with executive difficulties, resulted in creating non-defined spaces between the new structures and the buildings that existed in the former area. In addition, the remaining blocks between the new structures have been released, at a loss as to what to do.

The last published project report indicates that all the residential units and a part of the commercial units located at the first phase are being utilised. A part of the residential buildings located at the second phase also have been utilised and delivered to the purchasers. The rest of the buildings of the second phase and some of the third phase's structures were in brickwork and have been sold in advance. However, by April 2002 there was real progress of the project's completion and delivery of a part of the third phase.

Because of not defining the workshop areas and their improper separation related to the buildings, the executive operations made interference with people lives (Figure 6-19) and as the highway executive progress is faster than the surrounding structures, the surrounding lands were left in waste (Figure 6-20).

Figure 6-19/1 Vehicle Access, Inside of the Main Context of the Highway – at the Side of Active Construction Work of the Navvab Project
Source: The author, April 2002

Figure 6-19/2 Vehicle Access, Inside of the Main Context of the Highway – at the Side of Active Construction Work of the Navvab Project
Source: The author, April 2002

Figure 6-20/1 Neglected Urban Lands Adjoining the Highway – Following the Halt in the Executive Works in The Middle and Southern Parts of the Navvab Highway
Source: The author, April 2002

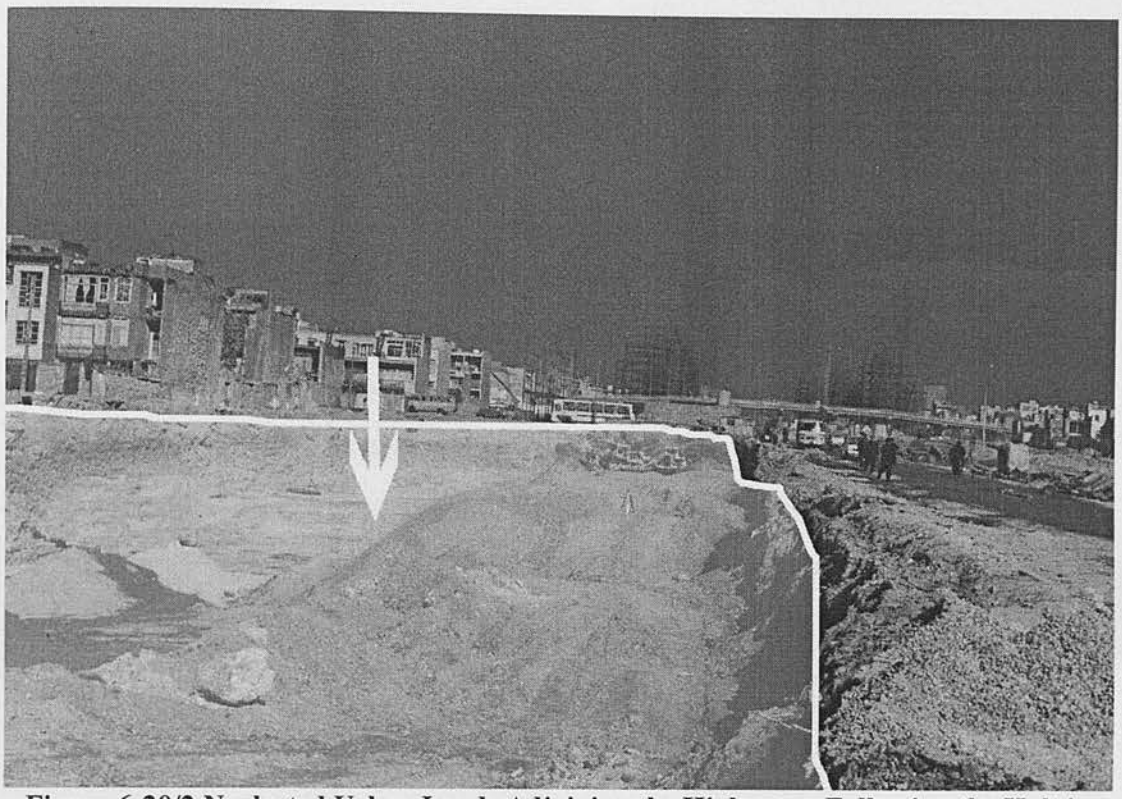


Figure 6-20/2 Neglected Urban Lands Adjoining the Highway – Following the Halt in the Executive Works in the Middle and Southern Parts of the Navvab Highway
Source: The author, April 2002

There are few documents and papers available regarding the difficulties of implementation, especially in the old and destroyed areas; but related to the contradictions and technical problems, four samples are presented:

Tehran Municipality No.: B – A /6301
Date: Jan. 6, 1995

Tehran Abadsaz Company (Private, Joint Stock)

The respectable Consultant Engineers:

ACEC, GCEC, BACEC, SHCES, and Naghsh-e-Jahan Pars- NJPCEC:

Respectfully, according to the order of the respectable Deputy for Technical and Constructional Affairs of Tehran Municipality, it is necessary to indicate the following issues regarding the religious places located at Navvab Plan:

1- The exact Name and their address;

2- The site and the superstructure metre;

3- Building useful life;

4- It was built for the religious purposes or it is a common building;

5- It is a mosque or a mourning place, or a mosque which for its construction the people were shared and for it implementation they have read a public homily.

By the way, regarding the suggested mosques, the site and the superstructure metre should be identified.

You are requested to order indicating the location of religious places located in the plan and reflect it exactly in the location plan near the design situation with 1:1000 scale (general plan site of each of the councillors work boundary). In addition, send it attached to the requested documents at above maximum in 15 days after fax date of the letter.

Sincerely,

Abdollah Khosravi Kamrani

Chairperson of the Board

GUENO Consulting Engineers Date: April 24, 1996

No.: P/N/160

The Respectable Management of third Phase of Navvab Project,

Mr. Namazi, Engineer

With compliments and respect,

As the building No. 7, Nejati Alley, for the created cracks on the mentioned structure may collapse at near future, and in addition, this plot is far from Navvab Project structures excavation about 3 metre, therefore its excavation may results in some dangers. So, it is suggested to purchase the mentioned buildings and take action in their destruction.

The Supervisor of Direct Control

Tehran Municipality No.: T – A /3253

Date: Aug. 12, 1997

TEHRAN ABADSAZ COMPANY (Private Joint Stock)

Sazian Councillor Engineers,

Respectfully, you are requested to participate in the meeting which will be settled in Tehran Abadsaz Company Office, at 10:00 a.m., on Saturday dated Aug. 16, 1997, for solving the executive problems regarding the bridge of Komeil St. junction with Navvab Highway in relation with Rasoul Akram (P.B.U.H) mosque through fulfilling necessary investigations and offering proper suggestions together with the map and the location details.

Mohammad Hossein Reisi

Managing Director

Tehran Municipality No.: T – A /2857

Date: July 30, 1996

Tehran Abadsaz Company (Private, Joint Stock)

Gueno Consulting Engineers

Regarding the emergence of improving and bettering the buildings appearance facing outside the Navvab plan, which for the destruction of some of their parts or the adjacent houses, some semi-destroyed form have be found, hereby it is requested to,

Investigate and provide the necessary recommendations about repairing and improving such buildings, regarding all the aspects and especially the total proper price and offer the required coordination with the project structures.

Mohammad Hossein Riesi

Managing Director

6.1.3.1 Economic Implementation

According to what was determined, in terms of the planning of the financial resources of the project (Participation Papers' sale), this issue was implemented by virtue of letter No. 3220, Sept. 6, 1994 of Islamic Republic of Iran Central Bank. Tehran Municipality was allowed to publish 250 milliard Iranian Rials Participation Papers from Iran National Bank (Bank Melli of Iran) which published and sold 250 milliard Iranian Rials of Participation Papers in four stages in Tehran's other cities. The schedule of sale in each of the four stages is as per Table 6-1

Table 6-1 The Schedule of Selling Participation Papers
Source: The author, 2005

Phases	Dates	Amounts billion Iranian Rials
First	Oct. 94	75
Second	April. 95	75
Third	Oct. 95	50
Fourth	April. 96	5
Total		25

Through starting the sale in advance of the structural units from the second 3-months of the year 1375 of the Iranian calendar (a little after selling the last stage of the Participation Papers) the proportional flow of the project cash also was started.

The condition of transfer of the Navvab apartments during 1996-98 was as follows:

- The price of each square metre is the sum of Iranian Rials 1,000,000/- of which 85% of the total amount was received in cash and the remaining 15% at the time of delivery should be paid.

- During the above-mentioned period, in the case of presenting Participation Papers of the Navvab Plan, 85% of the price has been received from the purchasers.

From March 21, 1999 until March 19, 2000 due to the agreement made through the bank, it was agreed that 50% of the price of each residential unit up to the sum of 50 million Iranian Rials could be offered to the purchasers as the loan against bank claims from Tehran Municipality (converting to purchasers' obligations). In addition, following this procedure, the basic price of the residential units was increased from one million Iranian Rials to 1.2 million Iranian Rials without considering floor increase coefficient, which itself formed a high amount.

From March 21, 2000 up to now, the basic price of the apartments has increased from 1.2 million Iranian Rials to 1.47 million Iranian Rials and then to 1.8 million Iranian Rials.[27]

Recently, the main sale and transfer of the units, except the previous method, was to transfer to Housing Co-operative Companies and the (main) purchaser groups, and the receivables through buildings' pre-sale until March 20, 1997 (end of Iranian Year, Esfand 1376) was equal to 76,023,150,109 Iranian Rials.[28] Moreover, by the end of Azar 1379 (Dec. 20, 2000) the amount was 228,969,911,147 Iranian Rials (total equal to 304,993,061,256 Iranian Rials).[29]

The statements of Navvab Project Costs up to the end of Esfand 1376 (Iranian calendar) can be seen in Table 6-2 and a part of this project costs up to the end of Azar 1379 (Dec. 20, 2000), Iranian calendar, is entered in Table 6-2.

Table 6-2 The Comparative Table of Expenditure Distribution of the Navvab Project
Source: The author, 2005

Phases	Total Cost till March 20, 1997	Total Cost till Dec. 20, 2000
First	180,522,772,169	212,189,351,503
Second	168,139,880,997	236,298,827,524
Third	102,717,826,305	152,401,966,413
Fourth	160,897,677,246	195,288,919,691
Fifth	18,124,752	18,124,752
First to Fifth	10,110,122,419	13,843,299,948

[27] Manuscript notes on official papers of "ROT", which are the base of executive tasks.

[28] The report of Project Control Centre of Tehran Abadsaz Company-PCTAC. (March 1997).

[29] The report (Dec. 2000), Project Control Centre of Renovation Organisation of Teharn - PCROT.

Table 6-3 The Partial Financial Resources
Source: The author, 2005

Financial Resource	till March 20, 1997	till March 20, 2000
Sale and Sale in Advance	76,023,150,109	304,993,061,256
Sale of Bonds (Literally Participation Papers)	250,000,000,000,000	250,000,000,000,000
Credits for Housing Loans	———	109,215,047,785

According to Article 31 of the "Executive Instruction of the Regulations of Distributing the Participation Papers" and Article 5 of the "Contract of Reward between Tehran Municipality and National Bank of Iran (The Client)", Tehran Municipality should purchase all the properties constructed in the Navvab Plan, which were unsold by due date of Participation Papers. However, until the end of 2001 (1380, Iranian Calendar), despite the due date of Participation Papers falling on Sept. 22, 1998 (as the amount of 250 billion Iranian Rials), no necessary arrangement was made in this regard. Therefore, the overdue cash was paid by the National Bank of Iran.[30]

Following a management crisis in Tehran Municipality about March 20, 1997 and a break in urban affairs' decision-making, such as about the Navvab Project which occurred at the beginning of the year 1999 (1378, Iranian Calendar), Tehran City Council was settled after a long break (following the elections) and it made all the decisions regarding Tehran city.

Tehran City Council only had three approvals regarding the Navvab Project during the last period .One of the approvals was a single article, which in the 41st meeting of Tehran City Council was passed on Dec. 3, 1999 as follows:

[30] The fines for these interest, according to the content of article 8 of the "contract of reward", is equal to 30% that is, its payment is on the municipality of Tehran.

"Single Article:

Tehran Municipality is allowed to implement the note according to the Article 7 of the "Law of distributing the Participation Papers", approved by the Islamic Consultative Assembly of Tehran. It deposited tax debt of the distributed Participation Papers' profit, which totals 8,375,000,000 Iranian Rials, from its income source to the deposit account of the Ministry of Financial and Economic Affairs. Finally, being added to the mentioned cost and the required credit is considered as the supplement of the current year budget.

Therefore, a part of the Navvab Project expenses was drawn to the Public Budget of Tehran Municipality; correspondingly, the City Council in its 43rd meeting on December 21, 2001 through clause B, approved another single article, which regarding that the Navvab Project (Participation Papers), National Bank of Iran claims, should be considered and paid in the Tehran Municipality budget supplement. Finally, the last approval of Tehran City Council is related to the 182nd meeting on Sept. 24, 2001, which appointed that:

To speed up the Navvab Project's implementation, and to solve people's problems, Tehran Municipality is allowed to allocate the sum of 500,000,000,000 Iranian Rials (500 billion Iranian Rials) from the increasing budget of 2001, row No. 61, of Tehran Municipality for the deeds and lands located in the mentioned projects . Therefore, through mentioned approvals, Tehran City Council transferred projects' sources from a self-sufficiency system - which was a part of the primary aims - to the public budget of Tehran Municipality.

6.1.3.2 Management

Generally, the main and axial management of the project was the responsibility of the "Technical and Constructional Deputy of Tehran Municipality". The Deputy, which is part of the urban management of Tehran City, has administrated the Navvab Project. These operations of the management were done up to direct the action of the Technical and Constructional Deputy, despite the presence of other bodies and the

responsible institutes dependent on and under the supervision of the mentioned management. For example:

IN THE NAME OF GOD

Date: June 27, 1995

No.: 70/8682

Dear Mr. Khakpour,

The Respectful Managing Director of GCEC,

Subject: Estimating the economical values of the plan related to investment

Regarding the constructions around Navvab Highway, it is necessary to fulfil the important studies and investigations related to investment through paying attention to the plans, which has been provided by councillor engineers and estimate the necessity economical explanations of the plan and the total costs related to foundation and whole of the plan.

Therefore, you are expected to declare the suggestive sale prices of residential, commercial and administrative units and the manner of their transferring through pay attention to the above investigations and the district potential and other effective parameters related to them, as soon as possible.

Abolghasem Ashouri

Deputy for Technical and Constructional Affairs of Tehran Municipality

However, starting the pre-sale of constructed units and the utilisation of a part of the project; decisions were made beyond the scope of the Technical and Constructional Deputy. So, the "Financial and Administrative Deputy" (as the services and goods company, the client for pre-sale and financial resources provision and project cash flow) and the Tehran Mayor, having the same authority as a president was placed in this boundary, all of which were effective at the time of the project implementation and its utilisation and so on.

In the middle of 1993, the Technical Affairs Deputy of Tehran Municipality, according to letter no 10/7325297, Sept. 14, 1993, delegated the authority of complete implementation of the Navvab Project to "TTBC" (Affairs like land possession, selling the constructed structures and sharing the earned income through the partners and settlement of account). This company, by virtue of the result [?] authorities, regarding the legal necessity caused by Participation Papers' sale for implementing the Navvab Plan, took action in establishing "TASC"

By the end of 1999 and the beginning of 2000, when the subject of Participation Papers and the report of the bank was complete and the subjective matter of TASC had lost its point, the responsibility of project administration was transferred to "Tehran City Renovation Organisation", which was one of the old complexes of the Municipality. This happened because of some legal pressures, which were imposed by judicial power to Tehran Municipality Organisations and Management (1997 to 2000). Then, both TASC and Tehran TTBC were omitted from this circle.

In the way of decision-making, bodies such as Tehran City Technical and Engineering Consultant Organisation, Tehran City Engineering and Constructional Organisation, the Higher Council of Surveying Architecture and Urban Plans-HCSAUP and TSC, and finally the Honest System supervising the use of Participation Papers' monies, have been present to different effect:

- The Technical and Engineering Consultant Organisation in some stages of the project's progress acted as one of the decision-making bodies. But from the middle of the designing stage of the project (from 1995 and following the establishment of TASC) it left and its role was given to a complex of consultant engineers and presenting technical and engineering services to the project.
- The Engineering and Constructing Organisation, as an executive group also became responsible in road and junctions' implementation.
- The responsibility of revisiting and expressing an opinion of the plans on technical, executive issues became the responsibility of HCSAUP. The mentioned Council, along with the client's wishes, reminded the consultants of the problems, weak points and deviation from the rules (related to the plans) and after remedying the defects, have approved them. Nevertheless, although "HCSAUP" was assumed as the highest reference for presenting expert decisions in cases of the offered designs by the colleague consultants, in practice, the final decision of the mentioned Council, before confirmation and notification of the Technical and Constructional Deputy of Tehran Municipality, could not be executed. For instance:

Date: July 10, 1995

Dear Mr. Ashouri,

The Respectful Deputy of Technical and Constructional Affairs,

Subject: Navvab Project (second plot – west side)

Referring to letter no T A /3255 dated June 24, 1995 of TASC; it is hereby to inform that through investigating the mentioned plan (the work of GCEC) the following issues should be noted which are worthy to be paid attention through the plan consultant:

1- Investigating settlement of the sport lands near the administrative and commercial spaces and the highway;
2- Allocating a proper place for garbage loading under the ground;
3- The width of residential units' corridors is not proper;
4- For eight types of administrative units, six hygienic services were foresighted (two private services and four public services) which it is hereby suggested that each administrative unit has one private hygienic service and the space dividing plan should be reviewed.
5- Determining the place of installing shops tableau;
6- Revising frontages designing and besides coordinating with the plan executer and other consultants, forecasting the pre-cast method for the plan implementation;
7- Paying attention to the plan expert advice;

Hereby, it is advised to offer necessary coordination with the plan implementer and other consultants of Navvab Project by the plan consultant:

* Determining the place of bus stations and fire-taps along the path;
* Selecting installation system for administrative and commercial units;
* Allocating the transferable branches to the shops such as water, sewage, electricity, and telephone branches and so on;
* Foresight possible educational, cultural and sport spaces and etc. in the under designing plot;
* Urban furnishing through coordination with other consultants;
* Coordinating with consultants of the adjacent plots in designing common boundaries;
* Necessary coordination with the Client in the cases of frontage construction mate Iranian Rials and executing of the plan in the form of pre-cast.

Higher Council of Surveying Architectural and Urban Developing Plans- HCSAUP

- TSC as a specialised institute has considered the theoretical principles of the project more than the others, especially in the case of urban development and has suggested basic lines and general policies for the project. TSC for any reasons related to the Navvab Project, entered into the discussion and expressed opinions very late. This Council once participated in the 93rd and 94th meetings and discussed the investigating ways and project study of the Navvab Plan[31], but no specific conclusion was achieved. After the break and crisis occurred in the Navvab Project, this council attended the 114th and 115th meetings (July 1999). It discussed how to manage the urban issues in the present situation of the Navvab Project (while the Deputy of Technical and Engineering Affairs of Tehran Municipality and Architecture and the Urban Development Deputy of the Ministry of Housing and Urban Development were at those meetings), but no specific conclusion was reached. Through collecting the discussion documents of the recent meetings, the following items are important:
- Unlimited constructed structures on the one hand, and the destroyed spaces on the other hand, have disturbed the environmental and social arrangements of the surrounding areas.
- Lack of fulfilling the presented aims at the allocated time (Oct. 1999), in practice will omit any partnership of people in urban participation and this matter will cause unbelievable social costs.
- The present conditions need at least the concept of the Navvab Highway to prove to be true and issue must comes true without any dependency on investment in the edge constructions.
- It should be kept in mind that the concept of the highway would have no meaning without cross and edge connections.
- The difficulty of modern urban development will begin from the time that it creates a distance between public and private sectors.
- The main problem of the Navvab Plan is that its designer wanted all the work, from programming to implementation to delivery, etc. to be fulfilled by himself.
- The Municipality decision supports any way that makes a speedy connection to the Navvab axis by completing metro operations, the continuation of the Chamran

[31] Salimi, Javad. (1999).

Highway would be converted at least to a first-rate urban route up to Ghazvin Ave.

- Opening Navvab Street can result in problems as follows:
- Fast traffic will pass through the centre of the workshops, which in practice, will offer an improper urban scene. On the other hand, workshop availability, which now is through a prepared site, with an opening on Navvab Street, will be confronted with difficulty.
- As before, it is necessary to observe the Navvab Plan in its border and at the city scale so that the management crisis can be organised well.
- It is necessary to keep in mind Navvab's birth in Tehran city and believe that such a matter will not cause any financial crisis nor any increase in a social-political crisis.
- The Navvab Renovation Plan, as before, is a heavyweight project in Tehran Urban Renovation. In the areas around this plan, the current implementation will be stricter and in the far regions, Tehran renovation will cope with 'softer' implementation phases.
- It is necessary to offer a single definition of the Navvab Plan and define it as a plan as big as Tehran city; therefore, any group which is eager to follow the Navvab Plan thoughtfully, has no way, except search the methods, which use no public support from the plan and public participation in it has no primary priority.
- The other problem is that a long-term operation, which requires short-term management, needs to exit from managing a crisis through which long-term urban renovation policies outside the short-term managements should be exercised.

These recommendations without any executive guarantees, mostly contains general topics regarding the urban design and far from design and implementation stages.

In general, supervision as good faith of the executive of "Executive Manual of Supervision Legislation on Bonds" (Rules for the distribution of participation papers) and Article 15 "The Reward of the Contract between Tehran Municipality and National Bank of Iran - The Broker" is the responsibility of the trusted third party.

Implementation of the agreed contract with the Central Bank of I.R. of Iran, regarding the fulfilment of the responsibilities in executing the "Navvab Renovating Plan" by the Tehran Municipality, was provided and confirmed through the plan managers and has been investigated by the Auditing Organisation of the Ministry of Finance and Economic Affairs. This organisation, based on current auditing standards, investigated the balance sheet offered by "TASC" and announced its report to the Central Bank of I.R. of Iran.[32] It should be mentioned that by ending the subject of Participation Papers, the responsibility of this body also came to an end.

The planning consultants, had the responsibility primarily for the design and implementation of the highway and also construction of the highway's marginal lands. In addition, from the beginning, one of the consultant engineers companies (ATCEC) was elected as the lead consultant for designing the entire highway and as the provider of architectural and urban development regulations. At the second stage of project design, the above-mentioned responsibility was transferred to the HCSAUP and Gueno Consulting Engineers (GCEC) implicitly and indefinitely (which afterwards undertook the responsibility of supervising structural activities). However, such a matter cannot be followed and investigated by a defined institute or centre. Supervising the third stage and the workshops at the beginning of the project implementation was the responsibility of GCEC and then it transferred to the design consultants.

The contractors (40 companies), were almost all from the private sector and undertook the responsibility of the Navvab Project Implementation (highway, junctions and the surrounding structures).

For some parts of the project, some private sector contractors felt their capital or services had not had the opportunity to be present and compete, however, public contracting companies (such as Iran Metallic Industries Company which was the contractor of the metallic skeleton) did attend.

[32] This financial report and balance sheet ought to be presented every six months.

6.2 Public Documents (The Press)

6.2.1 Specialist Publications

More than 272 volumes of different specialised publications, which have been published regarding urban issues, urban life, urban development and urban programming during 1984 to 2001 (1369 to 1380 solar calendar) in Iran, have been put into control, but surprisingly, only one issue was considered, the Navvab Project.

That exceptional issue is the essay, which was presented by Mr. Reza Sirous Samadi together with Ms. Gisou Ghaem, entitled: "Navvab, Analysis of an Urban Plan". It was published on pages 84-89 of the "Soffeh" publication, no. 29 (fall and winter 1999-2000 - 378 of the solar calendar), which was issued through Shahid Beheshti University, Faculty of Architecture and Urban Development, Tehran. The essay subjects are based on the studies, documents and papers, which were concluded through the author's studies in the field and were offered to Mr. Reza Sirous Samadi, the original reference of the fore-mentioned essay was my researches, which were presented on the above pages.

Lack of viewpoints, criticisms, suggestions and strong and rich analyses, especially in the specialist publications of the country of an undertaking as large as the "Navvab Project", at first glance, it causes a great deal of surprise, which in offering necessary ideas and analysis of it, is allocated to another section (but not in the documents section).

6.2.2 The Press

Press documents related to the Navvab Project were surveyed and studied by the author under three separate stages (idea, plan, and implementation). Existing documents showed completely, that at each stage (idea, plan and implementation of the Navvab Project) the body and economical area and spaces have obtained more attention. As the original and basic method of these researches was based on the measurement, in other methods such as surveying and studying the documents, the author attempted to find direct and indirect reflections on the following concepts:

confronting and viewing the city, urban development and city-making efficiencies, plus condensation, urban elements, people partnerships, the old structure and cultural heritages were tracked down through managers, specialists and people's views.

6.2.2.1 Idea

At the point of history of the formation of the Navvab Project, it was mentioned that the starting point was referred to as the Tehran General Plan (approved in 1989, 1368 of solar calendar). However, the planning and first reflection of this idea in the public thoughts is referred to as a subject entitled "Plan of Widening Navvab Street from People and Officials View", written in Internal Bolton of Tehran Municipality. It is in this publication, which the notice of approving the Navvab Width Alteration from 45 to 100 metres is announced in the Commission of Article 5.

1

Designing a connective routes network is a completely specialised task and the engineers based on civil society requirements have studied traffic and the connections of roads' networks. Therefore, they have presented the design of widening the Navvab Street from 45 to 100 metres, which finally has been approved and put into practice in Article Five of the Commission of Urban Development Council.

In fact, it should be mentioned that, this design has been put into practice with a forthcoming view and regard to the need to connect the north roads network of Tehran to the south roads and conversely.

Internal Bolton of Tehran Municipality, Aug. 1991 (Mordad 1370 -solar calendar), Page 8.

After a two-year silence in publishing, this idea was restarted in Hamshahri newspaper, which, in addition to indicating the necessity of renovating the old regions in Tehran, the need to destroy about 120,000 residential units and constructing 200,000 new residential units, it introduced the Navvab Project and its likely effects on the southern part of Tehran.

2

By the Universities' Professors and Consulting Engineers, Surveying of the Renovation and increased beauty of Tehran Districts was begun.

Mr. Saied Tavakoli, Vice-president of Manager-Director of Tehran City Renovation Organization, in an interview with a Hamshahri correspondent said, "Tehran City Renovation Organization based on Tehran general design in 1968 (1347- solar calendar) aims to supply long-term plans for the city, through using specialised expertise and counsellors. Surveying of destroying 120 thousand old residential units and complete renovation of two hundred thousand residential units is one of the future actions of this Organization"

He added, "Navvab Safavi Project which is considered transit road of south of Tehran to the north with 5185 meters length will be executed in five stages."

Hamshahri newspaper, No. 107, March 10, 1994, Page 3

By the time that the newspapers with a wide circulation began to talk again about the Navvab Plan (May 10, 1992), up to its operational start (at the beginning of April 1995-1374 of the solar calendar), twenty news items had been reflected (mostly in Hamshahri, which is dependent on the Tehran Municipality). Six news topics covered the organisational aspects and provided explanations regarding the project's dimensions and its importance; three news topics were related to social-cultural issues; the rest introduced the importance of propaganda for the Navvab Participation Papers. The Navvab Project, which at the beginning was indicated as the plan of a highway, was associated with its round constructions:

3

Engineer Ali Reza Saber, Vice-President of Tehran Municipality Technical-Constructional Deputy, in an interview with our correspondent indicated that: "The heavy expense of the Navvab Plan had caused this plan to be shelved for a few years and if the plan were to be executed using the income and annual budget of the Municipality, it would last several years. The plan of building construction is also considered for converting the Navvab Project into an economical plan."

Hamshahri newspaper, Feb. 28, 1994, page 4

According to the official idea of Tehran Municipality (Civil Engineering-Technical Deputy), another part of the Navvab Project, which for its civil engineering operations is allocated a large volume to itself (construction of the highway sides), was also added to the Navvab Project and the Navvab Idea was presented in the body section with two parts of the Navvab Highway and its residential complexes.

The next issue is one, which arose, together with it and the Tehran Municipality in stating and introducing a base for the economical idea of the Navvab Plan (Selling Participation Papers) and it states that:

4

Gholam-Hossein Karbaschi, Tehran Mayor, believed that this plan implementation is the starting point of a series of non-experienced financial and banking operations in Iran's banking history. In addition, he said, "25 billion Tomans out of total 47 billion Tomans of Navvab Renovation Plan cost will be provided through distributing Participation Papers in four stages and the rest of the expenses will be paid by Tehran Municipality."

Gholam-Hossein Karbaschi mentioned the duration of fulfilling Navvab Renovation Plan is four years and stated that, "distributing Participation Papers to provide the financial needs of the Navvab Renovation Plan do not mean a lack of financial ability of the Tehran Municipality in implementing the mentioned plan. This method just speeds up the process of the Navvab Renovation Plan."

Hamshahri newspaper, Sept. 7, 1994, page 5

On September 7, 1994, the Tehran Mayor, together with the Head-General of the Central Bank in a joint interview, described the details of the "new" plan of distributing the Participation Papers as a new tool of Islamic banking and practising the use of the collected resources in the Navvab renovation plan. An economic idea, to be considered as a solution for supplying financial resources required by the project was entered under the name of Participation Papers Sale (in fact, the loan papers) in association and with the name of the Navvab Project.

5

From the first of month Mehr (Sept. 22), it will be executed by Tehran Municipality and through Bank Melli branches.

Participation Papers sale for executing big renovation plan of Tehran Navvab Street

Bank Mellli Iran One Hundred Iranian Rials
Tehran Municipality

Tehran Municipality
Date of Distribution: first of Mehr, 1379
Four YEARS PARTNERSHIP PAPERS OF NAVVAB

Hamshahri newspaper, September 7, 1994, page 1

6.2.2.2 Design and Plan

The design and plan of the Navvab Project was started in 1990 (1369-solar calendar), but in the press and specialised publications, few articles reflected on specialists' views or considered the specifications, the plan's effects on people, their requests and expectations. The publications were very poor in responding to this issue.

6

Engineer Tevakoli, implying that the Renovation Organization executes non-profitable projects, said: "the cost which is consumed for urban projects should ensure its validity by the project itself which in this way the Renovation Organization aims to take responsibility in the constructions at the edge of Navvab Highway." He added, "the width of this Highway is 45 meters and in each side designed 10 meters green space and 15-20 meters residential, trading and departmental structures which its first phase with a length of 850 meters was started this year and will be put into utilization 3 years later."

Mr. Tavakoli implied the highway margin will cost 20 billion tomans and that such a work has been referred to Tehran City Renovation Organization. He also said, "It is predicted to build 1100 residential units at the margin of the highway in phase one, which consists of 7000 square meter trading space and 150 thousand square metres is the residential units' foundation."

Hamshahri newspaper, May 10, 1993, page 3

Some stray information regarding the dimensions and physical specifications of the plan were stated, which mostly have been entered on the edge and in the middle of explanations which were written for another news.

7

Implementation of the second stage of Navvab Great Plan was started

BLOOMING OF PEOPLE PARTNERSHIP AND OFFICIALS ATTEMPT IN NAVVAB GREAT PLAN

* At the edge of second phase of the Navvab Great Plan, 1500 apartments will be built. Engineer Ashoori described the technical peculiarities of this plan and said, "the number of stories of the Navvab Great Plan structure is about 5 stories to 14 stories and in the first phase of the plan, 56 residential blocks with an area of 132 thousand square meters are being built." Ashoori added, "the plan of Navvab Highway with Imam Khomeini (P.B.U.H.) St., Helal-e-Ahmar St., Ghazvin St. and Rah Ahan Street will be crossed and a big square in Navvab-Hagh-Shenas will be constructed."

Ashoori said, "in Navvab Plan crosses with Komeil and Mortazavi Streets, two market bridges will be built which transportation of automobiles in this middle will be formed in the depth of 6 meters of the ground and between these two bridges, a square with a radius of 80 meters will be constructed." Engineer Ashoori mentioned the area of second phase apartments of this plan between 50 to 75 square meters.

Hamshahri newspaper, Aug. 24, 1995, page 3.

Only occasionally has the designing and planning for Tehran and its urban development been news. On May 29, 1997, an article entitled: "Our Urban Development Pattern" in the form of criticism, looked at the Navvab Plan and through requesting and witnessing thoughts and views, it requested that more attention should be paid to human aspects, which in fact were not clear in relation the Tehran and Navvab Project. Regarding the organisational aspects and physical plans, no further information can be found. Just in some cases, a little news was published related to economical plan specifications (solution for supplying financial sources of projects) which mostly have propaganda aspects and are offered for preparing the public's thoughts in the field of partnership in construction.

A purchaser of Navvab Participation Papers, in response to the newspaper correspondent who asked, "why are you buying these papers?" answered:

8

Third stage of "Navvab" Plan Participation Papers Sale was started

One of the applicants, who wanted to purchase 3 million Tomans of Navvab Participation Papers, in responding to our newspaper correspondent's question, based on his purpose for buying these Participation Papers, stated that, "profit rate of these papers is more than the banks saving account profit rate and in addition, this profit has been insured by Bank Melli. Also, the people who take part in purchasing these papers, after fulfilling the construction operations of this plan, will be put into priority for purchasing built structures."

Hamshahri newspaper, Sept. 24, 1995, page 4

In addition, regarding the welcome from the Navvab Participation Papers sale, Bank Melli of Iran announced that:

9

In the first 3 days of distributing the Participation Papers in banks

Participation Papers Sale in "Navvab" Plan passed the boundary of 15 billion Iranian Rials.

Economical Service: According to Bank Melli, declared in the first 3 days of the third stage of the Participation Papers' sale in the Navvab Plan, at least 15 milliard Iranian Rials. Of these Papers have been sold in Tehran and other provinces and it is predicted that as this process continues, all the 50 billion Iranian Rials. Papers, which have been allocated to be distributed in this stage, will be purchased before the determined date (Monday, Oct. 1).

Hamshahri newspaper, 791, Sept. 26, 1995, page 4

In addition, no further information was obtained regarding the Navvab Plan (including body, financial and economical plans).

6.2.2.3 Implementation and Performance

The publication at the implementation stage of the project, since the beginning of April 1995 (1374-solar calendar) up to now has reflected some types of different confrontations with the Navvab Project. On the other hand, these publications, through people being encouraged and persuaded to purchase Participation Papers and the propaganda in this regard, have attempted to preserve and continue financial support of the project:

10

Through Public and International Relations of Tehran Municipality

Executive operations stages of the Navvab Great Plan explained

In the report of the Public Relations of the Municipality, the purchasers of the first stage Participation Papers of Navvab Plan were requested to receive their first 6 months profit of Partnership in March 21 from the branches of Bank Melli. Public and International Relations of Tehran Municipality has recorded executive operations' stages of Navvab Plan during the last five months. It included ownership and destroying of residential, trading and departmental Units in the plan route, from Azarbaijan Cross to Ghaleh-Morghi. Its expense is an amount of 36 billion Iranian Rials. He also added that, "Tehran Municipality during this period has also studied on supplying five underground and upper-ground passages cross along the Navvab Highway with a credit of 25 billion Iranian Rials, which its 6 billion Iranian Rials has been expensed.

Hamshahri newspaper, March 13, 1995, page 3

And:

11

SECOND STAGE OF DISTRIBUTING THE NAVVAB PLAN PARTICIPATION PAPERS WILL END TOMORROW

Economical Service: The second stage of selling the Navvab Renovation Plan Participation Papers will end tomorrow and applicants can purchase these papers only today and tomorrow so that they can go to a branch of Bank Melli of Iran and purchase these papers so that in addition to investing and partnership in this plan, they can take advantage of at least annually 20 per cent insured profit. According to the report of our correspondent, from March 21, together with starting 20 per cent profit payment - the least profit of the Navvab Plan partnership – the second stage of these papers was started at the selective branches of Bank Melli. This report added that, "despite Norooz holidays, distributing of the second stage of these papers have been coped with a perfect welcome. Therefore, the due time for these papers purchasing will not extend and the applicants for investment in this plan only have these two days, today and tomorrow, for taking share in this plan through purchasing these participation papers from Bank Melli branches."

Hamshahri newspaper, April 3, 1995, page 11

And also,

12

From Yesterday Morning,

Navvab Plan Participation Papers are entered in Tehran Stock Exchange

Hamshahri newspaper, June 15, 1995, page 1

On the other hand, through stating the manner of the report and financial control of the Navvab Project, the publications have tried to strengthen public confidence in the plan and Participation Papers.

13

EXECUTIVE FUNCTION OF THE"NAVVAB" PLAN

The Municipality should report to the Central Bank

Economic Service: According to the Abrar Economic Service Correspondent report and the Accepting Valuable Papers Council approval (in Sept. 5, 1994 session and its modification on Oct. 31, 1994), Tehran Municipality was bound to prepare a report of the financial situation and implementation conditions, with honest declaration and to present it to the Bank Melli, at least every six months. Therefore, under the supervision of this Bank, people come to notification through the public media.

Abrar newspaper, June 24, 1995, page 4

The political opponents of Tehran Municipality, attempted to decrease public confidence in the Municipality:

14

Former Mayor of District 10 of Tehran was arrested with the accusation of millions Tomans embezzlement in Navvab Plan.

Keyhan newspaper, Aug. 16, 1995, pages 1 and 2

However, in less than one week, out of necessity, Keyhan corrected its previous version:

15

From the Court Judge and Director-General of Municipality Guard of Tehran in an interview with Keyhan

The Details of Financial Deterioration in Tehran Municipality of District 10 were described

Director-General of the Municipality Guard through declaring that these arrests are not related to the Navvab Plan and no embezzlement has occurred, added: "attempts of the Municipality Guard to arrest and discover the factors of financial deterioration in District 10 Municipality are continuing".

Keyhan newspaper, Aug. 22, 1995, pages 1 and 2

In any case, regularly, different news emerged about the Navvab Project and its implementation stages (especially, the matter of the Participation Papers sale). However, fewer issues were stated regarding the methods of implementation, successes and/or executive problems:

15/1

Despite remaining 5 days of the determined due time

All the Participation Papers of the Navvab Plan were sold

Public Relations of Tehran Municipality, through welcoming citizens and their confidence in the Tehran Municipality, appreciate their attempts and it is hopeful of obtaining good results in the near future with officials' co-operation and attempts to fulfil this important national plan and put into action one of the desires of responsible and compassionate specialists, that is the development and exaltation of this Islamic country.

Hamshahri, April 4, 1996

Executive operations of the Navvab Highway and its technical constructions (non-level crosses) were executed speedily, in comparison with other parts of the plan

(residential complexes) and were paid more press attention. After Dec. 18, 1996, some news was announced regarding the utilization of a part of the Navvab Highway and its bridges and intersections.

In the press of June 6-9, 1997, the news of the opening and utilisation of phase one of the Navvab Highway's residential complexes was talked about on the first page of all the newspapers with a wide circulation (especially consenting with the Municipality management and the government of the construction period). Following this, for a period, newspapers' pages were associated with the news related to the implemented parts of the Navvab Project and its importance and greatness.

16

With the Presence of the Construction Generalissimo (of Iran)

The First Stage of the Navvab National Plan is utilized today

According to the report of the Hamshahri correspondent, the first stage of the Shahid Navvab Safavi Highway includes the distance between Azarbaijan Ave. and Imam Khomeini Ave., where there is considered two law speed bands, two high-speed bands and residential structures, green spaces and the path for passers-by.

Through utilization of the Navvab Plan - which is one of the national plans of the country – the greatest highway network of the south part of Tehran to the North and conversely, has been activated.

Based on the comprehensive studies about Tehran transportation and traffic, through the Navvab Plan utilisation, which now is in its first stage has been supplied for public use, the fast connection of the north part of Tehran to its southern part and the completion of the Tehran highway network have been facilitated; in future, the possibility of presenting a new pattern of renovation will be offered.

Now, the first phase of the Navvab Plan between Azarbaijan Ave. and Imam Khomeini Ave. with 86 thousand square meters residential application, 13 thousand square meters trading application and 4000 square meters departmental usage plus 50 thousand square meters common area is ready to be utilised.

Hamshahri, June 8, 1997, pages 1 and 3

And:

17

Navvab Great Plan is a pattern for urban construction in the world

Mr. Hashemi Rafsanjani, by implying that the Navvab Plan can be a base for the continuing construction in the country, said: "we can renovate any old and destroyed region in Tehran similar to Navvab and through selling Loan Papers."

In the rest of his speech, he hopes that in a 20 year plan, all the old and destroyed regions of Tehran from downer of Enghelab can be renovated and renewed.

Ettelaat, June 8, 1997, pages 1 and 2

And:

18

The President in the Opening Formalities of the first section of the Navvab National Plan

Tehran Municipality has honoured our country in the world

* When a plan is achieved at a cost of more than 100 milliard Tomans, without using the country's budget, it indicates efficient management of Tehran Municipality.

*I consider it is necessary for people to visit the plan during its construction as they can see its greatness at the time of utilisation.

Through utilisation of the Navvab Plan, the heavy talisman of amending Tehran's urban structure was broken and the work was fulfilled. With which assessing its dimension in the past, the hands shook for its starting and different problems existed in the way of this plan's implementation which were associated with the hard situation of traffic, oldness of structures and land and buildings' ownership, which, all together, prevented its implementation. While even before the Islamic Revolution and during the Shah's regime, when such a plan was just an idea, the previous regime introduced it as a great utilizing plan in its propaganda. Mr. Hashemi Rafsanjani declared the idea of the implementation of the Navvab Plan as the first decision of the Revolution Council after the Islamic Revolution Victory. He also stated, "It that time in a meeting, the annoying problems of traffic and long road stops, which lasted for several hours and the stops of automobiles more than normal encouraged us to put Urban Structure Amendment of Tehran in our work priorities. Based on this, we decided to charge the first Mayor of Tehran to put bridge and expressways construction and solving traffic problems at his programme priority, but such a work was not fulfilled in practice. Of course, a part of its implementation hindering reason was the conditions of war days and we did not expect to spend country currency credit and even Tehran for these plans. State Construction

Generalissimo appreciated the great ambition of the Tehran Municipality in accepting the heavy load of Tehran city ordering responsibility and said, "after war, Tehran Mayor and Municipality in an unbelievable situation accepted to present the Navvab Great Plan and 5 km. highway, together with its other urban services in the most central part of Tehran and offer it for people's use.

Law Assimilation of People Assets

Mr. Ashoori, Technical and Constructional Deputy of Tehran Municipality, apart from the explanations presented to the President during his visit to the project, reminded that, "Up to now, 500 billion Iranian Rials has been allocated to the Navvab National Plan. 250 billion Iranian Rials of that has been provided through people's participation; another 250 billion Iranian Rials was earned from Tehran Municipality expense."

He added, "in this plan, the praiseworthy action that has been fulfilled was people's participation and the absorption of their small assets for continuing the Navvab Plan."

Hamshahri, June 9, 1997, pages 1, 2 and 3

Following project utilisation and opening, an article entitled "Navvab Plan, 30-Year Talisman" was written by Hamshahri newspaper in three successive parts as a report from specifications and characteristics of the Navvab Plan. It mentioned topics such as, "Brilliant Illusion of People Partnership" and "the Biggest Projects in Municipality's History", but all of them suffered from a lack of new concepts or issues.

A large number of publications attempted to emphasise the project's prestige and its success and offered news regarding the government's high rank satisfaction from the project and the visit of high-ranking guests from foreign countries and their encouragement of the project and its implementation results:

19

Ankara Municipality in an interview with Hamshahri newspaper:

We will execute Tehran Navvab Plan in Ankara

Mahmet-Zia Kahraman, Ankara Mayor, at the side of General Conference of Capitals and Islamic Cities Organization stated to our correspondent: "the main problem of Ankara city is to order urban transportation and the automobiles' traffic, especially at the centre of the city."

He assumed the management manner and method of implementation of the Navvab Plan by Tehran Municipality very attractive and said, "The idea of this plan is totally new and it is hoped that I can take advantage of this idea and experience in renovating destroyed regions o Ankara."

Hamshahri, June 25, 1997, page 3

From more than 50 news items in the newspapers, which have been published since the Navvab Project's implementation up to now, only a few methods or basic criticisms have been presented from the view of specialists and serious compliments from the people's side. People's compliments have been based on the axis of availabilities and the necessity of installing sidewalk bridges on the highways for the connection of both sides of the highway for people and constructing schools or mosques.

20

The Navvab Great Project and its construction was begun in 1996 (1375, solar calendar), at a time when it was considered as the biggest construction project in Tehran city that the Municipality had taken action to implement. When we think about the remained ruins of this great plan, we remember the days that designers and programmers took action in constructing this project with milliards Tomans of national capital and some of them, with so much haste, opened its first phase while it was not yet totally completed.

* Similar residential buildings at phase 1 of the Navvab Highway and its red superstructure stones create a beautiful scene in modern architecture of the region and make it distinct from the other streets all over Tehran. However, going a little forward, we can see the remains of scratch and destruction on the surface of the new structures and the beauty seen at the beginning of the path has gradually converted into ugliness. No one knows who will pay attention to these problems finally so that the loss impressed on national investments can be stopped.

Salam, May 3, 1999, page 6

In the next issue, it discussed the improper situation of built units and the regretful condition caused by releasing the projects in an uncompleted form.

21

Now milliards Tomans of national investments have remained stagnant in this project, a considerable amount of these investments is wasted annually and the project that was predicted to offer great capital to the government and Municipality treasury, today wastes many assets and people should pay the indemnity of this great project's losses which remains uncompleted. The Navvab Project, which connects the north of Tehran to the south has remained incomplete after the Mayor's arrest and was released.

Visiting this project ruins, we can see the remains of several caves. The released buildings seem to have no skilful watchers. For taking photographs from the ugly and -24- beautiful scenes of the Navvab Highway, we selected one of the up-passing bridges and after taking the photo, we entered some of the incomplete buildings of the project. In the basement of one of these buildings, we found the remains of a sheepcote. It seems that some of the domesticated animals' dealers are active at the corners of this highway and work in illegal sheep selling and purchasing section and may be occupied in their killing also.

At another part, it seems that the architecture was intended to build a very beautiful passage on one of the passers-by bridges, so that in addition to presenting an exceptional location with beautiful scenery, it might attract passers-by ... The illusion of a chic and beautiful building under which passes an exceptional highway, is very attractive but unfortunately, this incomplete building, in addition to the ugly appearance that it has at the present time, contains the ugliest scenes inside and now has been converted to a lonely place for immoralities and drugs' use. Here is a safe place for offenders, addicts and death dealers.

The fetid smell plus dirt filled the air. It seems that some people have mistaken there with a W.C. Because on the ground, everywhere we look, we can see no place without man's impurities. We climbed the stair that is similar to a slide. At the first ramp in front of us, we coped with several used syringes, pill packages and semi-burnt candles. God knows who has used these syringes and how many times?

Salam, May 5, 1999, page 6

Ms. Nobakht (Tehran people's representative in the Assembly) said in protest:

22

Tehran Representative Speech:

Ms. Monireh Nobakht, the Representative of Tehran people, was the second speaker. In her speech, she stated that, "today, the Navvab Plan has been converted to a deterioration house. Last day, the newspapers wrote that during recent months 12 corpses have been found in these centres. Unfortunately, Tehran suffers from so many of these problems."

Keyhan, May 19, 1999, page 2

On June 26, 1999, the Tehran Mayor, in addition to the announcement of the break in the Navvab Project implementation, declared the news of its limited activities. He predicted up to the next three years, phases two and three of the project would be complete and step into utilisation stage (Hamshahri, June 26, 1999). In the Iran House Development Policies' conference, the Tehran Mayor said:

23

In the Meeting of assessing the policies of House Development:

Tehran Mayor Criticism of the Navvab Plan

Tehran Mayor stated, "The Navvab Plan is one of the biggest experiments of Tehran Municipality in the field of house-constructing. And this experiment can result in increasing the public role in house production, no more financial dependency on the government and taking advantage of small investment in the private sector, escaping from single construction, saving in foundation and etc…."

Implying that the Navvab Highway construction is one of the main axes in connecting the northern part of Tehran to its south, he said: "This plan was expected to expend 120 milliard Iranian Rials for ownership of the properties in this region, but it comes to 143 milliard Iranian Rials and finally increased to 250 milliard Iranian Rials"

He continued: "The Navvab Plan has been criticized totally and primarily from different viewpoints, but no all-out and reliable assessment has been offered." He added, "The head of the criticisms that can be heard … include the criticism of selling Participation Papers and not taking advantage of an all-out plan in designing the city."

He stated, "Executive costs of the Navvab Plan were supplied from the Public Participation Papers' sale, which of its type, was the first experience in this regard and were insured with a 20 to 30 per cent profit annually, so that such a matter has forced a heavy financial pressure on this plan. The approximate double increase of these amounts due to an ascending rate of inflation will also exceed the total cost out of the capacity of the financial power of the society low incomers."

Keyhan, Oct. 24, 1999, page 14

While in the news, we see the visit of the Minister of Interior, together with the Tehran Mayor from the Navvab Project and opening a part of it (Hamshahri, no 2349, Feb. 24, 2001), the member of Islamic Council of Tehran city said:

24

The Member of the City Council:

The report of social group correspondent from yesterday's open meeting of the City Council,

The Council is informed neither of the opening of the Navvab Plan nor the destroying of white soil area!

Mr. Mohammad Ebrahim Asgharzadeh, the Member of City Council, in a part of his speech and in responding to the Head of the Council said, "the Council talks about the Navvab Plan; the Navvab Plan was opened in the presence of the Minister of the Interior and Tehran Mayor! Why was the White Soil Area destroyed without the notification of the Council?"

Iran, February 28, 2002, page 4

Finally, Hamshahri newspaper in the issue of March 3, 2001, in an article entitled: "Navvab is expecting a new Identity", sought to find a loss that has been buried in the ruins of Navvab's old structures.

CHAPTER SEVEN

PARTICIPANT OBSERVATION

CHAPTER SEVEN
7. PARTICIPANT OBSERVATION

7.1 Idea

The new management in the municipality of the city of Tehran that was appointed in the period after the Iran-Iraq war (in a period known as The Reconstruction era), chose the development of the inner city highway network as its main objective and as the east-west axes did not have enough potential, the Navvab Highway as the continuation of the Chamran Highway gained the main priority among the chief managers of the municipality of the city of Tehran (the mayor and his technical and development deputy section of Tehran Municipality).

Considering the history and background of the Navvab district and its dense context, the only space for the highway was the area of Navvab St., with the width of 16-20 metres. Therefore, an area of approximately twenty hectares of the urban lands and its buildings had to be bought by the municipality that was not out with its financial resources. Therefore the management decided to find a simple solution to this complicated problem, and that was to sell in advance the possible advantages that this project might have in future, hence this development project was accompanied by an economic project, and thereby new justifications and reasoning, such as renovation of the old context, constructing service and housing unit were put forward.

There were no real studies and investigations about the scope and the span of the project, rather there were some elementary calculations indicating that the width of twenty to twenty-five metres on each side for the construction works with a density of five hundred per cent, had to be provided for the project.

This idea was not formed in the defined institutions of the municipality; rather it was concluded between the mayors of the districts and their advisory teams. Without any prior technical studies and any technical, socio-economic justifications, this plan was ratified, in a routine order of Article 5 Commission (such plans were routinely discussed in the technical working groups by the specialists before being presented in

the commission). At the 149th meeting, 30th June 1990, this plan was corroborated. Along with these events, the issue of attracting investment for the urban development projects was undertaken, but the old ruined context of the Navvab district had no attraction for domestic investors. At this point, one of the options was to hand over the project to the private sector; another was to form a joint venture of domestic and foreign investors. But none of them proved to be successful. Therefore, financial support was sought to be provided by the banks and the issuing of government bonds.

7.2 Design and Plan

The author was the organiser in the Technical administration of the municipality of the city of Tehran from September 1990 and then in TETCO. The job that these organisations had to fulfil was to provide counselling services for the studies and planning. Therefore, it was proposed to the Technical and Development Deputy section of Tehran Municipality (TDDTM) to undertake a study and a comprehensive investigation of this project. Ultimately, the ATCEC that at the time was engaged with formulating the co-ordination plan of Tehran (these investigation and studies were later ratified as the Second Comprehensive Plan of Tehran in 1991), were chosen to undertake this task. The reason for this choice was that they had an up-to-date technical knowledge of Tehran on the one hand, and the absence of information and document exchange among the consulting engineers and the experts on the other hand.

ATCEC was assigned to investigate the subject matter and propose alternatives in forty-five days for the course of the highway in the old ruined context, advance better sites for future possible investments, suggest new plans and designs for the construction works on the sides of the highway.

In October 1990, the ATCEC scheme was presented that encompassed suggestions for the course of the highway, traffic plans for the interchanges and also some estimation of the maximum of construction density, comparative calculation of the expenditure of implementing the project and the outcome and benefits.

To interest the domestic and foreign investors in the project, there had to be plans, plots and schemes, that being the case, the construction plan for the preliminary phasing of the project for the buildings and construction works on the sides of the highway was allotted to five consulting engineer companies (ATCEC included). One of the specifications of the project suggested to the consulting engineers was the use of industrial building materials in the construction and allocation of beneficial projects with economic justification.

As the plans and schemes were presented, domestic and foreign investors were seeking more information about the schemes in the Navvab Project to consider the possibilities of future investments. As an example, the plan presented by the BNCEC for a trade centre in Haghshenas Square seemed quite appealling. Nevertheless, due to international political-economic problems, none of these investments was actually fulfilled.

These investigations, studies, talks and efforts to interest investors in the project were not carried out in defined institutions, rather it was put into effect in lobbies and through informal relations and the results were announced orally in meetings.

The next step was to invite the investing foundations associated with the government such as Bonyad-e-mostaz'afan, pension fund to invest in the project. The Social Security Organisation came to an agreement with the municipality to invest more than fifty billion Rials in the project. After paying an amount of more than twenty billion Rials in return for the title deeds, due to the fact that the municipality was still seeking new sources of investment, and also because it did not yet carry out the undertaking of providing all the title deeds, the Social Security Organisation refused to fulfil the initial commitment and pay the rest of the money. This dispute has not yet been settled and part of the documents and plans of the project are still in the possession of this organisation.

At this stage the municipality was convinced that the implementation of this project was to be undertaken by its own manpower, therefore it started talks with

banks for the financial support but could not gain the satisfaction of the Credit and Money Council and the Central Bank of Iran for this backing.

As a result of the urban development tasks carried out by the municipality (based on the money invested by the citizens and applying new mechanisms for receiving municipal charges and selling surplus density) it had gained a level of credibility, validity and viability among the citizens. Hence it announced the establishment of a financial institution to incorporate the capital of the citizens, in return for an interest rate higher than the banks. The government and the Central Bank were somehow taken by surprise by this decision and decided to issue government bonds to back the project. The high-ranking officials of the municipality and those of the Central Bank (gaining the agreement of the president of the time) sought to find a mechanism to attract small capital amounts of the public and because the announcement of a bonds issue would imply the financial ineffectuality of the government, hence these bonds were called the "Participation Papers – Oragh-e-Mosharekat".

In fact, the President and the government welcomed this policy, and ever since, have issued these bonds for various purposes and governmental projects. In this way, the government bonds are sold in way that is more approved and accepted by the public.

To reduce the price of housing units and consequently increase the demand for these units, and to meet the criteria set by the banks to be eligible to receive mortgages, there was a decrease in the dimensions of the housing units' area.

The board of commissioners responsible (HCSAUP) for investigation into the previous plans and designs and the more recent plans (the reduction of area dimension and the approach to more commercial and trade centres and constructing less housing units), suggested the substitution of the advisorate and employing more consulting engineers. TDDTM announced that it had decided to use the national engineering and architectural potential in this project. This announcement had this implication that

through this summons and participation of more experts, there would be less criticism in future, if it proved to be successful.

TETCO, which was established before the revolution to renovate the old contexts and localities, because of the commitment of its directorate and forbearance in their tasks and its financial and administrative codes and regulations, was disregarded and ignored from the project. Instead, the TadBiraft and AbadSaz companies were invited to take the place.

TDDTM, in direct co-ordination with the municipality of Tehran, undertook the planning and performance of the project. When it was time for the advance sale of the housing units, one of the associated companies of the financial and administrative deputy section of Tehran Municipality was entitled to join the managerial (decision-making) system.

The TDDTM used the advice of technical consultants in accordance with its will and judgement. No other public or specialised institution was invited to participate in the planning and decision process of this project.

7.3 Implementation

The implementation of the project started with the ownership and destruction of the land and buildings which were in the way of the project. For more than twenty-five years, the owners were uncertain therefore they were somehow willing to sell their properties. In addition, the lack of development and renovation in the district during these years had caused the buildings to become ruined and therefore the prices of the houses were quite low. Some of the properties were purchased through the years but as the performance of the project became certain and with the money obtained through the Social Security Organisation, the purchase process sped up and was accelerated when the participation bonds were issued and sold. In accordance with the advice of the mayor of Tehran, TDDTM as the performer of the project, allocated this process of proprietorship to the mayors of the districts and undertook the task of supervising the process.

Before the completion of the executive plans of the highway and the construction works, the performance of the project had started at a high speed. All the works were under the direct control of TDDTM but through the Tehran Abadansaz and Tadbirbaft companies. To accelerate the process, several consulting engineers to prepare the plans and plots (six architects and urban designer consulting engineers, four technical civil engineers and two geotechnical consulting engineers) in addition to the TETCO, a group of well-known contractors were invited for the work. But for the provision of the building materials, technical instruments, the main frames and skeleton, were provided through a common centralised system for all the sections.

TDDTM announced its priorities in terms of speed, quality and price as the criteria for pursuing the project. However, due to the lack of financial credits and the economic situation, there was a displacement in the order of priorities, first the quality and after two years, the speed of the work was affected by the economic and financial conditions. For the co-ordination of the plans and solving the performance difficulties, several actions were chosen to affect the speed and the quality of the works, among them were the establishment of certain institutions for managing and decision-making in the project. These actions were as follows:

- Holding co-ordination meetings for the consulting engineers responsible for the planning and settling the disputes among them for co-ordinating the plans.
- Holding co-ordination meetings between the contractors and the supervisory body to overcome the performance difficulties.
- Employing consulting engineers as the direct supervisory group to physically overcome the implementation difficulties.
- HCSAUP.
- That all the proposals were to be made in the presence of TDDTM but the decision-making and undertaking of them was the responsibility of the deputy Mayor.

The presentation and the sale of the participation bonds was carried out in accordance with the schedule and through wide-ranging publicity in the media and the

press. They had a guaranteed interest and were tax free. It was quite successful at the first stage but eventually, the public showed little interest in purchasing the bonds, therefore, the municipality had no choice but to purchase the bonds to avoid the negative effects of this lack of participation on the market and on the performance of the project. At the peak of this crisis, the municipality had to hand out these bonds for the claims of the contractors, and later concede other legal rights and even properties to the contractors. Moreover, when the bonds were sold at a satisfactory pace, the municipality used the money for other projects. In any case, the capital turnover of the project was not in the sequence and order that was forecast in the plan.

In 1997, the first phase of the project was inaugurated in the presence of the president of the Islamic Republic of Iran, while there was a lot to be fulfilled in the buildings and in some parts, like film studio sets, what could be seen was only the façade of the buildings as there was no water, electricity, elevators and telephones, as a result, nobody could reside in these buildings (Figure 7-1). At any rate, six months after the formal inauguration, the first phase was actually in use. That inauguration ceremony was in reality a ritualistic medal-giving to what is referred to by the state as "The Reconstruction Era".

The collaboration of the consulting engineers and the contractors with the municipality and their competition in this regard, the indispensability in respect of experts working with the municipality (on various projects), created a situation whereby specialists and experts were unwilling to get involved, whether individually or in their professional or social formations (the Consulting Engineers Society, the Association of Advisors) in the Navvab Project.

In that situation, if the experts and specialists had somehow been in agreement with the project and the way it had been undertaken, their comments would have been highly praised and supported. But this indifference coincided with a specific political and administrative atmosphere in which the municipality was highly supported by public opinion due to the positive measures taken by the municipality and therefore, no criticism of any nature would have been heard, and the specialists were too

conservative to publicly pass judgement on this project. Hence, this project was never investigated and commented on in the press or in public.

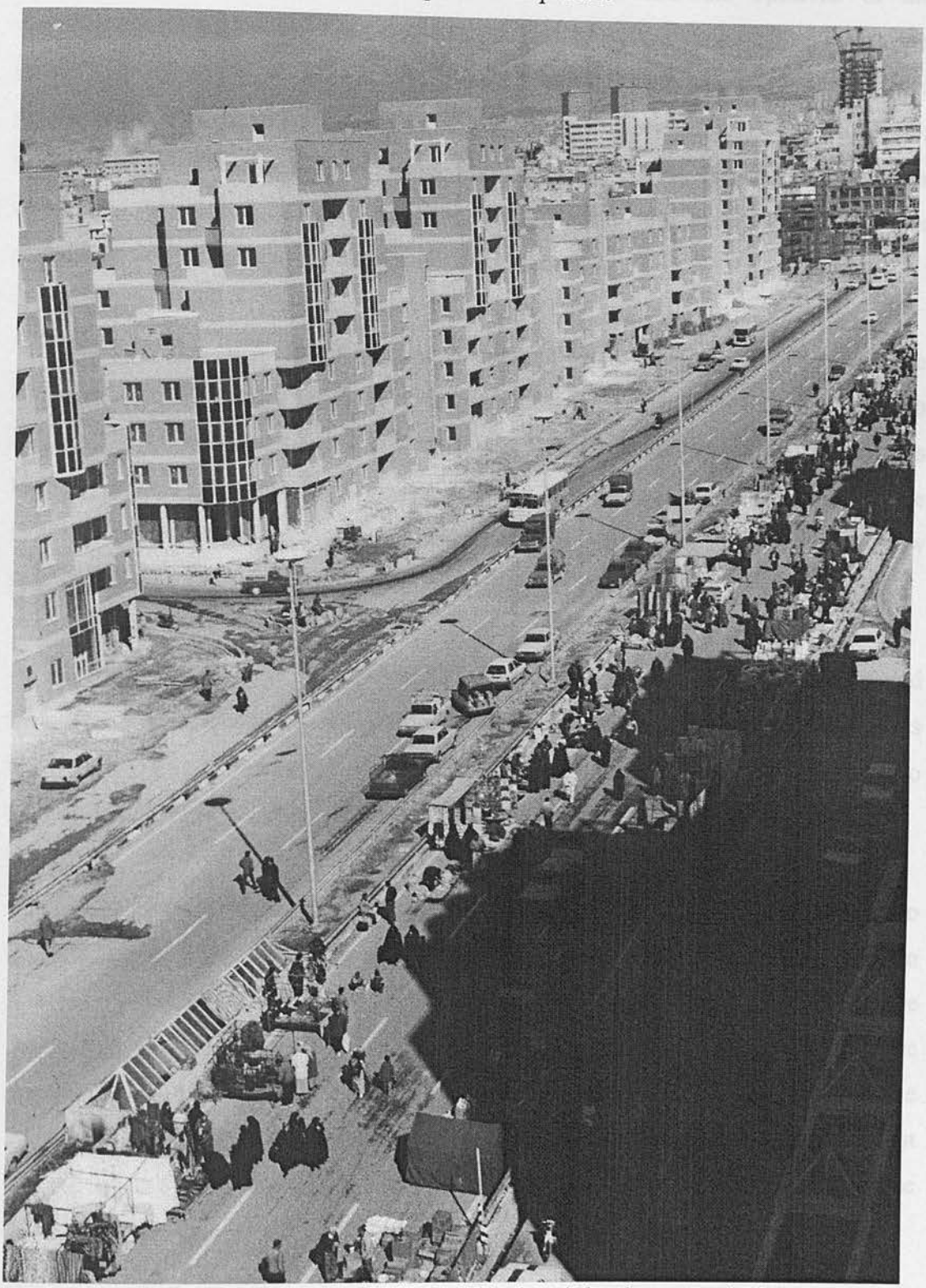


Figure 7-1 Phase I of the Navvab Project (after inauguration)
Source: PCTAC, Oct. 1997

Owing to the relations at work and on account of the author's position and his personal interest, he was informed about the ideas and the opinions of the aforementioned people and their strong opposition to the project and the way it was undertaken. Even the members of TSC (architects, urban designers, traffic and environment experts, urban economists and sociologists) were against the process of this project and its way of involvement in the urban affairs. However, they never expressed their ideas in any meetings, apart from a few exceptions which are mentioned in the report of the administrative documents.

The political, and consequently, the economic and managerial crisis that the Municipality of Tehran faced in 1998-99 jeopardised projects, like the Navvab Project, that were highly dependent on state policies and facilities. The project was brought to a halt and with the changes in high-ranking managers and the TDDTM, the methods and plans were revised but because of their partial view, they did not follow any particular course of action.

The Municipality of Tehran had to be relocated in its old legal position and considering the termination of the advance sale of the participation bonds, there was no necessity for the presence of the project implementer (TASC). ROT according to the regulation and the old organisation structure, took responsibility for the project.

When the crisis and the disputes were settled, the Navvab Project was returned to the previous routine system and method that the municipality applied to other urban projects. The budget was to be provided by the general annual budget of the municipality. The advance sale for the public was stopped and the housing units were conceded to different institutions and co-operative companies and the performance works were undertaken at a slow pace and are still in operation. Up to now, the first and the second phase have been completed and only thirty per cent of the third phase has been completed.

In the primary stages of the Navvab Project, all the decisions were made and the process of decision-making was controlled by the TDDTM section of Tehran

Municipality and the mayor of Tehran, and if any problems appeared in the field of urban management with public services (water, electricity gas suppliers) or other urban institutions (police forces, traffic police), then they were settled by arbitration. For this reason, they could do whatever they wanted with the spaces in the way of project implementation, apart from a number of mosques, which remained undamaged due to the fact that they were public spaces, independent of the state and run and controlled by the local people and therefore, the related matters could not be settled without their participation. However, some schools, colleges and shopping centres were totally destroyed, promised by the municipality officials to be rebuilt at some other places.

CHAPTER EIGHT

CONCLUSIONS AND RECOMMENDATIONS

CHAPTER EIGHT
8. CONCLUSIONS AND RECOMMENDATIONS

8.1 Inference

The way of dealing with urban issues and the related debates about a city has always been an issue of great intellectual concern. The Athens Charter, and its basic concepts and assumptions, has been the standard in this regard. Nonetheless, the problem that arose was how to deal with the puzzling issue of urban development and extension overtaking the urban studies seeking solutions for subsequent abnormalities and malformations. Any single, old traditional approach seems to be inappropriate to take control of this situation. Hence, the main question here would be to find a way to overcome the present passivity and non-intervention and take control of current affairs. Now that various, multidimensional approaches to city and urban issues are appreciated and accepted, is it possible to find a model to encompass the methods and models required for a fruitful involvement, making us fully aware and well-informed about the problems and issues?

"Who is wise, is stronger" (Ferdowsi)[1]

In the years following the mid-1990s, the author has been thinking continuously about the above matters, looking for a suitable answer and then he was encouraged to investigate and study the matter. His previous experiences led him to a point of view that was based on a systematic approach, that the central core of urban society (civil life) is the public sphere. Therefore, in order to conduct and control the process of urban development, and to have an active involvement in the city and in urban issues, there ought to be a system through which interactions and mutual relations in public domains are formed and required physical, social and mental spaces are produced. In this way, the system can produce and reproduce public spaces and spheres.

Fortunately in 1996, the author was recommended and motivated to write his PhD thesis under the title "Public sphere - public space as the basis of civil life" that

[1] Ferdowsi is considered as the great national Persian ipick

required research and study in order to discover a model and method for involvement in the city and its related issues. Meanwhile, the broad involvement in the old urban context of Tehran through the performance of the "Navvab Project", provided the right set of circumstances, which seemed to have the qualities of this subject matter. Hence, with Tehran being the author's field of study and the Navvab Project as his case study, he was on the right path to fulfil this task.

In this study, in addition to the search of the study, resources and securitisation, based on the thought and worldview held by the researcher, a theoretical framework was sought (Chapter 3), a brief study was carried out to provide an image of Tehran's urban space and to designate the place of the case study in its overall environment.

As can be seen in the process of attitude modifications from the Athens Charter to the 2000 Charter of the New Urbanism, there has been an eventual decline in the role of fixed functions and inflexible procedures. At the same time, there has been an increase in the possibility of adaptation, continuity and interrelationship between the elements of an urban system. By this, the system is prepared to be more flexible and answerable to spatial requirements at different times (goal attainment) and/or attempts to preserve the local and traditional patterns. By this, the urban system would gain the capability and propensity to produce and reproduce public spheres and domains.

A comparison between the two attitudes and lines of action towards urbanism and urban planning expressed in the 1933 Athens Charter and the 2000 Charter of 1993, was of particular help to develop scales for classifications and categorisation for evaluating the approaches to public spheres.

To have an appropriate research method, some pilot studies were undertaken. For this, combinations of methods were adopted to reach a more creditable result. To evaluate the opinions of the experts, directors, officials and citizens, a survey method was used. Documentary method and content analysis was used for the historical background of the case study, administrative documents and those that were published in the press. Finally, participant observation was used to complete the data and

overcome the kind of evaluation that the previously mentioned methods would impose on the subject matter due to their mechanistic approach.

The results derived from the survey, and the study of the opinions and approaches of the public and the experts, led to the approval of the hypothesis. Hence, the majority of the public (respondents to the public questionnaire) and the specialists and executives (respondents to the specialists' questionnaire), even those who were actively involved in the different processes of the Navvab Project, have the tendency which is more or less quite close to the attitude and perspective expressed in the 2000 Charter. The obtained results indicate that:

- Most of the citizens, experts and managers believe that urbanism and urban life is a result of an interaction between different public and private sectors, it can be interpreted that they are emphasising the systemic nature of the public sphere.
- Most of the experts and managers believe that urbanism is not a single isolated science, rather it is a process, method or conduct, which itself is the result of various disciplines and fields of studies. They also believed that public participation is a key element in this process, which consequently, would lead to the creation of public domains in mental spaces, public domains in social spaces, and ultimately, the expansion of public domains in urban physical spaces. This development of physical space is correlative with the development and evolution of mental and social spaces and has a reciprocal effect.
- A majority of the experts, executives and the public believed that there ought to be a variation in the land use and urban spaces for a better urban life. Most of those who held this idea also give credence to this precondition that variation and adjacency and the interrelated conducts ought not to cause interference. In their opinion, there has been an emphasis on belonging to life patterns of the past and the traditional lifestyle, such as local and neighbourhood relations, and shopping from local shops.
- A majority of the experts, executives and the public were in favour of changes and alterations, renovation and the reconstruction of the old context, meanwhile,

to preserve the urban identity of the location, they also insisted on the maintenance of the old context.

The groups under investigation confirmed the hypothesis of this research that the public domain and the public sphere is the basis of civil life, and the production and reproduction of it is generally concerned with social participation.

If we do not find actual co-ordination and convergence to this tendency, especially among the decision makers and directors of the Navvab Project, then, we should look for its reasons and causes. This is mainly because the social participation through which the exchange of ideas becomes possible, has not yet been institutionalised.

The results of the survey of the smaller society (of specialists and executives) and of the larger society (citizens and residents in the district) show that the majority of the smaller society believe in decision making, planning and designing the public space and have a tendency towards it, but their acts do not follow the thought held by the majority. This matter is obvious in the Navvab Project and in newly established social institutions such as the Tehran Specialised Council - TSC. The main cause of this should be sought, in the absence of a reproduction system of public spheres in urban life.

According to the administrative documents of the Navvab Project, the approach towards the city and urban phenomena, namely, the old context, highways, housing and land use, has been of a modern architecture and urbanism. In the process of design and performance, the effective force and factor has been the government sector and even the architects and urban planners were commissioned by the state.

Different phases of managing the project, namely the idea, the design and the implementation and at different stages of providing solutions, decision-making and implementation, the main support was provided by the state and the main source of facilities has been that of the governmental sector. There has been no real attitude to

seek support from the public and the people who reside in the district. Even the title "participation" which was given to the sale of bonds, could not conceal the non-co-operative nature of the project, which is the main cause of the two-year halt in its performance.

The descriptive report of the administrative documents also reveals that in all stages, sections and levels of the Navvab Project, there has been little concern about the public domains and public spheres. In addition, as the report shows, the process from idea to performance, suffers from the absence of interdisciplinary knowledge and intersectional conducts.

The state-run projects solely depend on the advice and recommendations that are produced in the system of the state, therefore, any alterations to the objectives, design and performance would pursue the same procedure that led to the planning of this project. Therefore, there would be no disputes and challenges over the decisions. For instance, when there are alterations to be made to the right-of-ways of the highway (10-30 green-yards, in accordance with the ratifications for the extension of the Navvab Project) they are carried out without paying attention to these principles and therefore, the adaptation capabilities between the residential complex and the highway is weakened. Another example is the phasing of the project. The north section of the highway (spacing Azarbaijan Street and Chamran Highway) was set to be the final phase of the project, therefore, the accessibility of the whole project (mainly the Navvab Highway) became questionable, and by ignoring the objectives of the project, the idea and the design lost their systematic function. Why does this happen? Why is there no one to inquire and why are there no respondents? This seems to have been the routine of the system, when the project came to a halt, or now that it is being carried out at a slow pace, there is no one to hold and accept the responsibilities.

Public documents (the Press) which were published during the performance of the Navvab Project, confirm that no attempts were made to make people informed and there was no communication between the public, directors and officials to exchange ideas and viewpoints. There is also no evidence for the exchange of viewpoints

between the specialists in different fields of urban studies. The only thing that the documents show is simple political and economic justification, vindication of objectives and the planning of the project. No attention was paid to the importance of public opinion and the one-way informing process received/receives no feedback.

The analysis of these documents reveals that they only express the viewpoints of the executives and the directors of the project, and if the public deserve any attention, it is when they are encouraged to invest in it and provide financial support for the project. These documents are also the scene of confrontation between the public on the one side and the directors and implementers appointed by the government. Even the public was not informed about this project (as a broad involvement in the city and in the social life); they only become aware of the project through the consequences.

The participant observation report explains that executive decisions at all stages of decision making, planning and performance, and at different phases of the project; generating the idea, providing designs and performance, were all made without the active contribution of the public. Therefore, the public only become aware of the results when the physical development of the project interfered with their public and private life, leaving them no appropriate time to adapt to the process, accept and/or criticise it. Due to this, the outcome of the procedure was unable to form a systematic relation with the social and mental space of the citizens in the urban environment.

This report also reveals the differences between the approaches of the executives and directors on the one hand and the public on the other. However, these opposing ideas never received any criticism and evaluation due to the lack of opportunity for them to be presented in the public sphere. Hence, all the viewpoints were expressed and conveyed in unofficial, non-institutionalised and private gatherings, as there seemed to be no mental space for such an exchange of ideas and opinions.

On the whole, all the influential elements and factors in the process of involvement in the city (that can turn out to be influenced at times), hold this opinion

that in such processes, the contribution of all institutions and groups, whether governmental, professional, private, or the ordinary public, is quite necessary.

Nevertheless, in the Navvab Project, that is a broad involvement in the city of Tehran and can be classified as modern urbanism and town planning, this requirement was not met and fulfilled. The systemic principles, systemic involvement that encompasses goal attainment, adaptation, continuity, preservation of traditional and concealed patterns was totally ignored. The consequences of such actions are that they are quite distant from the initial objectives, ideas and designs that require a solution to facilitate the interaction of this involvement with the urban life.

8.2 Application

Based on the approved hypotheses, certain solutions and answers can be presented concerning the case study. The survey undertaken and the obtained data that encompasses suggestions and reproofs about the Navvab Project can be helpful in testing the hypotheses.

- The main criticisms and faults found with the Navvab Project in order of priority are:
  - The highway and its offshoots in the residential complexes, old locality and context of Navvab.
  - A lack of urban services and facilities.
  - Weaknesses in the study and planning of the project.
- The main suggestions for the Navvab Project in order of priority are:
  - Extensive studies and investigations.
  - Generating and expanding the public domain and spheres.
  - Public participation in urban affairs and involvement in the city.

Based on the approach and the attitude approved in this study, a number of resolutions are presented here in order of priority and the scale of future involvement and measures:

1. The generation attitude of the idea, planning and performance of the Navvab Project, based on the preferences and the special land use, the expansion of private domains was pursued as the main objective of the project. The highway, quite functional at the urban level, proved to be impractical for the district (from the point of view of urban life). The residential units and complexes, which were regarded, frequently, as the main function of this project, suffered greatly from a lack of attention to public domains and spheres. Even in the practice and implementation period, the forecasts for the idea and the design to prevent the interference of land uses, such as the green-yard filters between the fast- and slow-lanes of the highway, the right-of-way for the green-yards, controlled access from the highway to the slow-lane and even double-glazed windows for the buildings, were totally ignored. Therefore, the first result of accepting the aforementioned hypothesis was to alter the objective of producing private domains to expand the public domains and spheres so that the main objective of the project was to be the expansion of the public spheres and domains. Based on this objective, the design and the performance of the project would have to be revised.

2. In the course of the design and performance of the Navvab Project, certain collective conducts and praxis were formed, some of which were in the public domain. Due to their affiliations to centralised government, management did not have the opportunity to be institutionalised and be present as a subsystem in the whole project system. The result of such collective praxis among the specialists (architects and urban designers) can be seen in the creation of market bridges, platforms and other public spaces that have some link with the old context (Figures 7-11, 7-12, 7-13). These spaces that were supposed to contain possibilities and facilities for collective urban conducts, in practice, are either not completed, despite the fact the residential complexes and the highway in that part is in use, or are being used for other purposes by the governmental sector (The Renovation Organisation of Tehran) (Figure 7-12).

In the new approach, that possibility for collective conduct and exchange of ideas between specialists and experts should be institutionalised, in the form of a system to produce, reproduce, and expand the public spheres. These public spheres should form systematic relations between the residents and directors (expansion of public sphere of the social space). Giving priority to and activating the designed public domains (market bridges, platforms) and foreseeing similar designs to allow urban life to flourish (the expansion of the public sphere of social space) and consequently, this would cause a rise in the price of residential units and the private sectors to invest in the complexes.

3. The Navvab Highway was designed in conjunction with the city of Tehran, without paying attention to the context of the district. However, in practice, the fact that the northern section connecting the Navvab Highway to the Chamran Highway has not yet been constructed and the lack of performance of the southern part (phase five) has made this highway a detached and dissociated piece, acting as a regional avenue. In order to redefine its connection with the district and decrease its undesirable effects on urban life, and considering the hypothesis' viewpoints, it is necessary to minimise the access to the highway, which potentially, can act as a catalyst in the space between the highway and the residential localities. In this way, it could help the adaptation of the elements of the system and connect it with the local contexts and formations (adaptation of the system with its environment). By this, the highway could make connections with the main streets of the region (the main east-west streets, like Imam Khomeini, Helal-e-Ahmar) through interchanges. In this way, the speed and movement scales of the vehicles in the slow-lanes would be minimised and made tolerable for the residential units (increase in adaptation). In addition, the proportion and the context of the commercial and service units on the side of the slow-lanes with the old locality and the residential complexes, would also be maintained (adaptation and continuity of the elements). Considering the slow speed of the vehicles and varieties in the land uses and its combination with the old context and generating the possibility of preserving the erstwhile and current patterns, the connection channels between the old and the new contexts causes

connection and interaction between them. In addition, it causes the expansion of public domains, the production and reproduction of spaces and new public domains.

4. There are several pieces of land left unused between the old and the new contexts, which the project has been unable to use. There have been no plans and designs for these pieces and they have eventually turned to the location for social misconduct, which would cause social insecurity (Figures 7-20, 8-1, 8-2, 8-3, 8-4). Besides, the height of the new buildings and residential complexes near the old passages and contexts has caused the new residents to be doubtful about the renovations and making alterations. With an approach expressed in the hypothesis, these deserted pieces of land can be regarded as the physical environment of the city and allocated to the social space for the emergence of public domains, thereby connections between the old and the new contexts will be set up. In other words, these abandoned pieces of land can act as catalyser spaces between the old and the new spaces (Figures 7-13, 8-5). They could also become the realm of interaction between the Navvab Project and the well-established public domains (Figures 8-6, 8-7, 8-8, 8-9, 8-10), which are old and stable patterns and models (places like the mosques and places for religious gatherings) (Figure 7-16).

5. If new institutions like "TSC"[2] or "HCSAUP" are supported and have stability in the urban system, through making systematic connections between the public domain of social space and mental space (unfortunately, they have been inactive for more than two years), they can be effective on the production and reproduction of public spheres. Removing the historic and evolved obstacles from these institutions (the study done on TSC is important[3]), embracing other fields of urban studies in this council and its systematic relation with the authorities and directors on the one hand, and the popular institutions on the

[2] Appendix III.

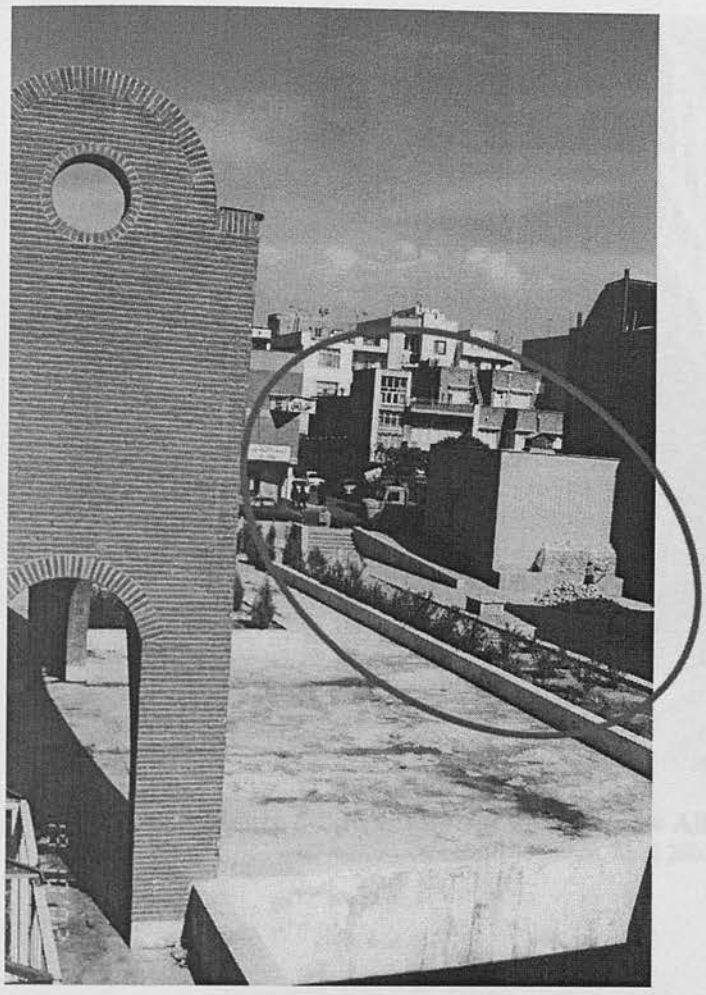
[3] Appendix III.

other, can be regarded as the starting point for the formation of an informed, capable system in urban involvement.

6. To proceed with the Navvab Project at the remaining sections (the main parts of phase three and the whole of phase four), the municipality of the city of Tehran as project manager, can focus on articulated and catalyser sections (to increase the adaptation and continuity of the urban environment system). It can overlap the old, the new contexts, and the hybrid spaces with the old context, leave the construction work of the residential complexes to the private and co-operative sectors, which embrace active, traditional patterns. By gaining the banks' support to provide mortgages and financial support of the private sector, a systemic relation can be established between the public, private and governmental realms (as suggested by the people). By this, the project manager can collaborate with the managerial and specialised institutions to create principles, regulations and protocols, to update the traditional models and patterns with the modern technology and science, and supervise the whole performance of the project.

Figure 8-1 A Space That Can Be Used As a Catalyst between the Old and New Context of Navvab District
(Source: The Author, April 2002)

igure 8-2 The Field and Contrast Works That Have been Left Behind and Which Can Be Used as Catalyst between the Old and New Context
(Source: The author, April 2002)



Source: The author, April 2002

Figure 8-3 A Space That Can Be Used as a Catalyst between the Old and New Context of Navvab District

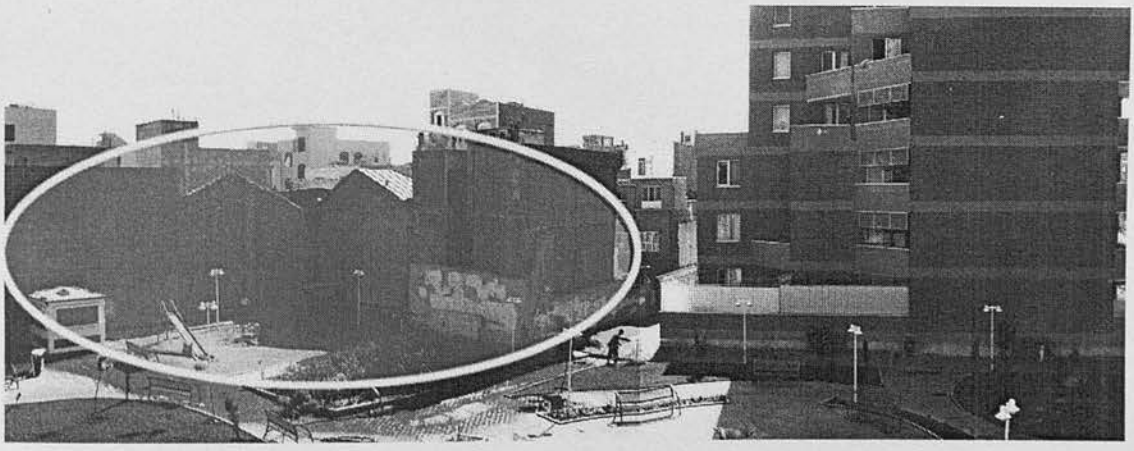


Figure 8-4 A Space That Can Be Considered as a Catalyst Between The Old and New Context of Navvab District in Revising the Planning

Source: The author, April 2002

Figure 8-5 New Context by a Narrow Alley of Old Context
Source: The author, April 2002

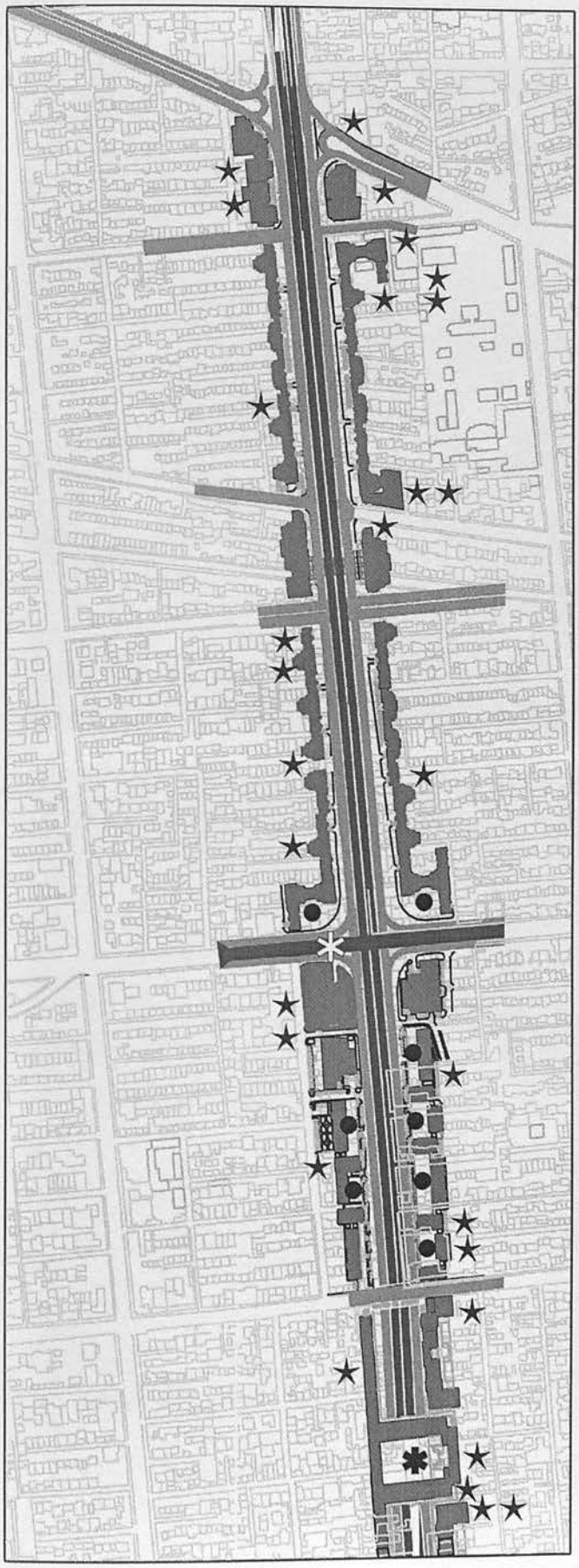


Figure 8-6 Occasion and Opportunities for the Growth and Development of Public Space and Connection between the Old and New Context, Seen in the Field Search

Source: The author, April 2002

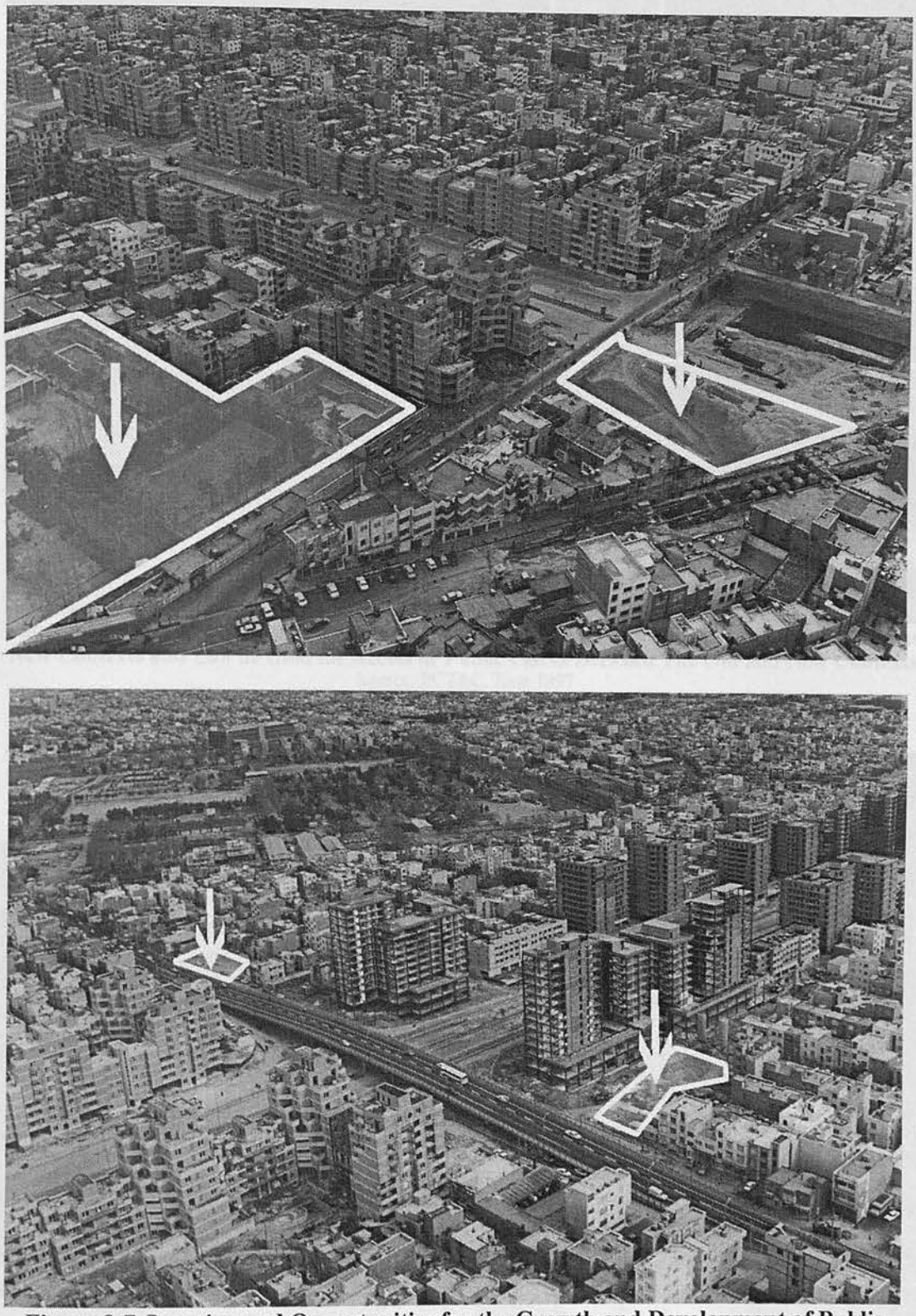


Figure 8-7 Occasion and Opportunities for the Growth and Development of Public Space and Connection between the Old and New Context, Seen in the Field Search
Source: PCTAC, 1997

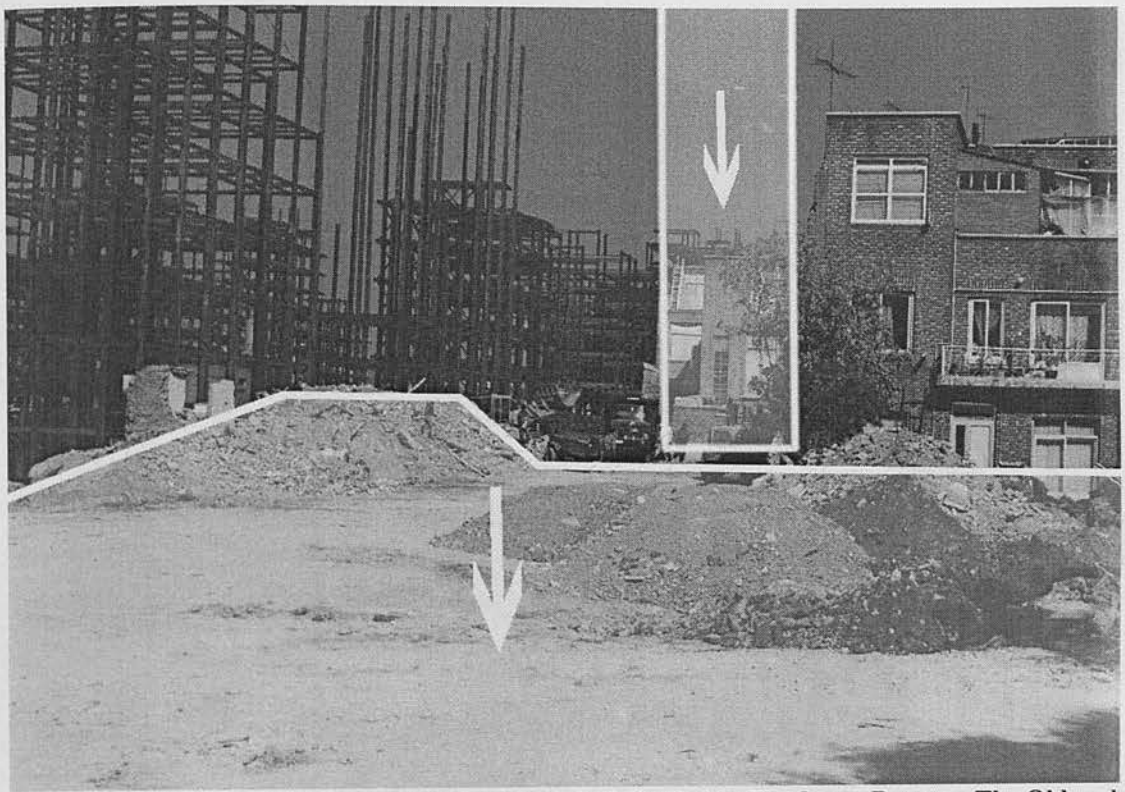


Figure 8-8 Fields and Grounds That Have Been Left Behind in The Space Between The Old and New Contexts and Can be Used for Access or Public Places Between The Old and New Contexts
Source: PCTAC, June 1997

Figure 8-9 A Space That Can Be Considered as a Catalyst Between The Old and New Context of Navvab District in Revising The Planning
(Source: The Author, April 2002

Figure 8-10/1

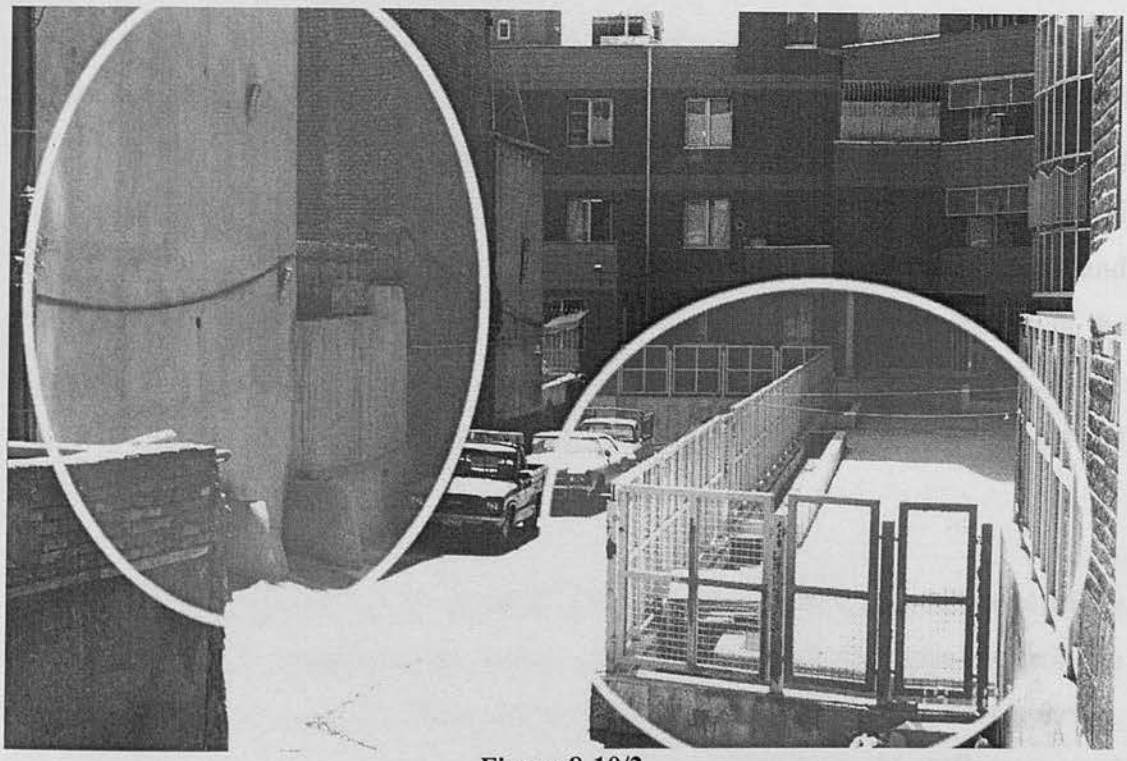


Figure 8-10/2

Figure 8-10 A Space (of the new context) that Can Be Used as a Public Realm
Source: The author, April 2001

Extended studies and investigations in the district and of the Navvab Project itself, that were clearly suggested by the specialists, directors, residents and people in the district, is itself a process that has a continual connection with the life of the individuals (social space) and their opinions, as well as those of the specialists, researchers, experts, directors and implementers. This process is dependent on controlling and directing the system of urban development and the interaction with its subsystems like instruments (documents, plans, regulations, geographical data and monitoring instruments), agents (managers and other effective forces in the city) and the context (the city and urban life and related changes at different scales and levels). Therefore, to achieve a system of fruitful studies and investigation, the establishment of active public domains and active communications between popular, public, governmental, specialised and professional institutions is quite necessary.

8.3 Emerging Model

With reference to involvement in the city and a way of involvement based on a systemic approach, it was mentioned that this process requires a controlling and directed system for urban development. For its positioning and systemic functioning in the urban and urbanism system, it is related to the Parsonsian quadripartite social functions (AGIL). As for the formation and positioning of a system, adaptation and continuity is necessary, this system itself is a subsystem in the greater system of the environment and attains its goals in a way that it is adapted and in continuation with the main system. This requires our model to be in connection with physical, social and cultural characteristics.

On the other hand, in the internal relations of a system, the relations of its elements with one another and its function in connection with the upper system, the latent patterns and methods, those that are currently in use, ought to be preserved. This preservation is, at the same time, putting an emphasis on the indigenous and local value of the attitudes and approaches to the city, related urban issues and ways of involvement and interaction. Nevertheless, this emphasis does not mean that the model cannot be proposed for generalisation or at least considered in parts for similar subject matters and homogeneous conditions.

This system, with respect to the continual and mutual relations of physical, social and mental spaces in an environment, ought to attain the goal of development of public domains to facilitate these relations and interactions. Consequently, based on this objective, the system forms its future aims, plans and ideas.

An active live subsystem of an urban system is a result of interaction between agent, instrument and context systems of the specific part in which it is to function. This system ought to be able to present and generate the permanent process of production and reproduction of public spheres, where civil life is consistently evolving and developing and would lead to the physical development of a city. (Figure 8-11)

The agent (deciding, decision-making and performing), instrument (plans, regulations, geographical data, monitoring) and context (urban and urbanism) subsystems have the same AGIL functions and are themselves, the consequences of systematic relations between physical, social and mental spaces.

Hence, finding the method (preferably with the help of latent patterns) of settling a relation between the mental spaces of individuals and creating public domains for this relation (consequently, the evolution of social space and thereby the development of public domains for this space and, finally, reaching the public domains for the physical space and urban environment) is the first step.

This initial step can be taken by finding a way for the presentation of the idea (through the press and the mass media), or from a social space (any cultural, or economic gathering) or even from a physical space or an urban setting (public parks, city squares). The social life and the way of life the people of a city are leading would reveal the appropriate kind of media. The latent patterns that can be perceived through study and investigation would be the most straightforward way. This has been the case in the Navvab Project and demonstrated in the Application section in this part.

This model and system can be applicable at any scale and for any urban subject matter as it is based on the public domain system, which is the basis for any urban life. Apart from a systemic approach, to apply this model, realising the way and the mechanism, the scales and the objectives, and distinguishing the subject matter for choosing various domains and spaces of involvement is entirely necessary. The control and supervision of the process of application can only be undertaken in the public domain. The main malfunctioning signs of a system would be revealed when any element of it was designated and controlled through a monopoly and therefore closed to public supervision.

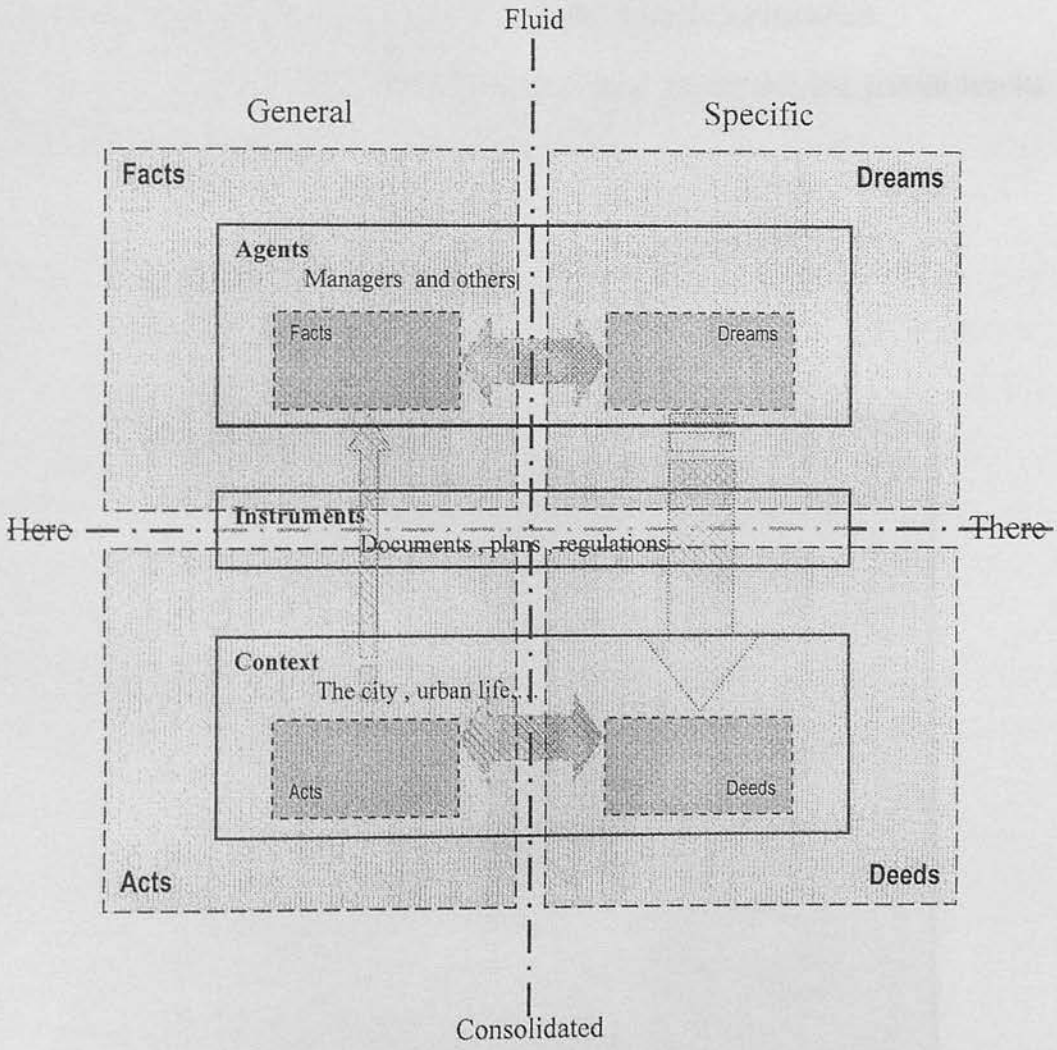


Figure 8-11 The Emerging Model

8.4 Results and Contributions

Apart from the sources provided by the academia, in carrying out this study and research and composing this dissertation three sources were put to use:

A) the generally known knowledge in the field of this research, which reviewed in the background section of chapters…..,

B) my own interest, orientation, intentions and efforts evince in definitions and descriptions of the subject and the relating issues,

C) the subject of this study (the city of Tehran as the field and the Navvab project as the case study) which identified the data and yield the information.

It is to be said that this dissertation in return would provide certain results and contributions to the above sources (Figure 8-12)

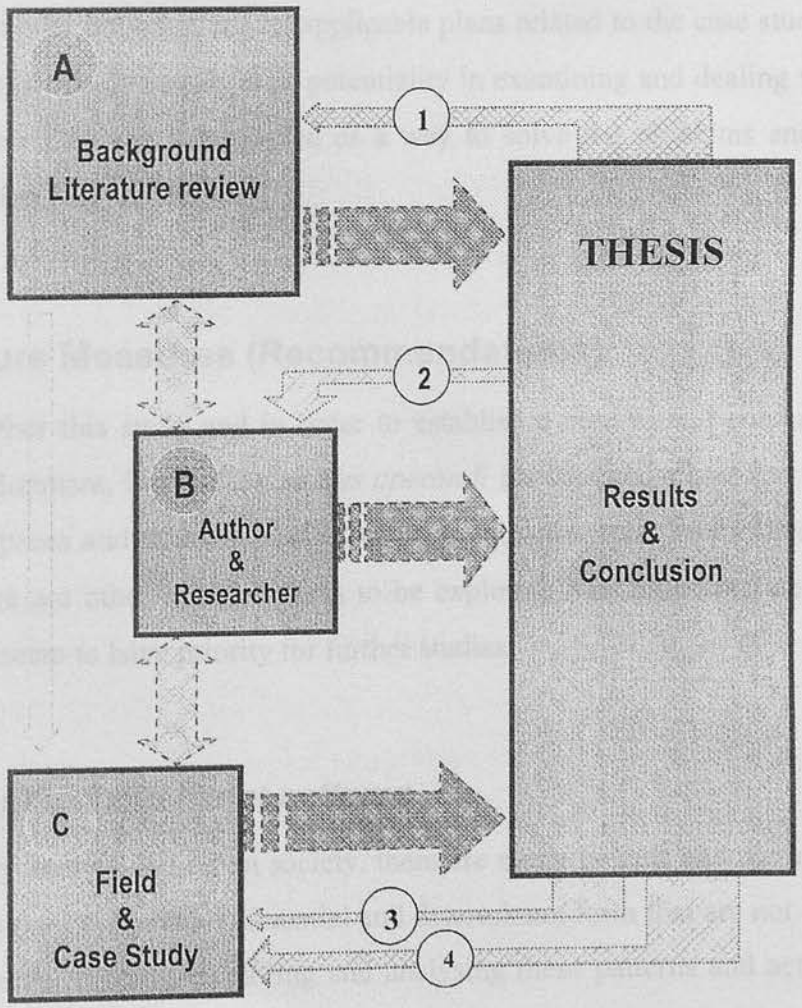


Figure 8-12 The Outcome & Consequence of This Study on Different Sources

1. the model and method specified in the dissertation based on the systemic approach and a theoretical look at Talcott Parsons' AGIL and Henri Lefebvre's production and reproduction of space. Subsequently a "System of Development Directing and Controlling" is presented in examining and treating city and its related phenomena. This would be a suggested way in interacting with the city.

2. Composing and presenting this dissertation has provided efficient training for such studies using a systemic approach in dealing with and treating city and related urban issues. The method used in the field and in the case study was scientifically controlled and supervised.

3. Tehran as the field and the Navab Project as the case study have been examined with a systemic approach, and the related data and information have been categorized and formulated in terms of this approach, which in turn has resulted in a better understanding of Tehran and the Navvab Project.

4. the model provided and its applicable plans related to the case study have been put in practice which reveals their potentiality in examining and dealing with city and urban issues. This can be regarded as a way to solve the problems and difficulties resulted of the Navvab Project.

8.5 Future Measures (Recommendations)

To further this study and in order to establish a control and conduct system of urban development, in future, a *modus operandi* for the production and reproduction of public spaces and domains and certain prerequisites must be fulfilled and in this regard, there are other research areas to be explored. The following are those fields that would seem to have priority for further studies:

8.5.1 Manifest and latent patterns

In every society and urban society, there are many models and patterns in active, semi-active (and potential), influential and determinant form that are not entirely clear and observable. Finding, exploring and analysing these patterns and activating them would help in possible future involvement in a city and in urban planning and designs.

There are various patterns and models that can be found and studied, some of which are; the enterprise in the bazaar, neighbourhood or locality, construction and building, charity and welfare, religious gatherings and congregations, and endowment patterns. The author has been obsessed by the patterns of endowment in urban societies for more than fifteen years. Although, this pattern is not solely allocated to Iran, Islam, and Shi'a (it can be seen in other revealed religions), its developed and advanced form, which has played an important role in public life and even in the formation of cities and its structural body (for example, in the city of Isfahan) can be seen in Iran. A scientific research and study should be undertaken on the system of endowment, which used to be quite active but now is rather inactive and it could function again in the various scales of urban life, production and reproduction of public space and domains. This pattern may be defined as a mechanism that transforms facilities, possessions and belongings and social, economic and cultural conducts from the private to public spheres.

8.5.2 Recognition of Non-governmental Organisations

Considering the growth of and development of democracy in urban societies and the need for its initiation and formation in developing countries, in order to replace the state-run affairs and reduce the state's involvement in the social life, non-governmental organisations need to take control of and conduct social and public affairs. Hence, the need for researches and studies in this regard, and allotting public spaces and domains to their supervision and planning might act as means of establishing a system of controlling and conducting urban development. Trade unions, scientific and professional societies, welfare societies and associations, and other socio-cultural groups usually have a very short life-span in Iran. However, their existence indicates the need and requirement for their activity on the one hand, and on the other, the lack of support for the continuation of their functioning. As an example, the architects and urban planners have formed some societies in the form of trade unions and counselling groups. If these groups are placed inside a system, they can play a role in the evolution and growth of the systematic involvement in the city and in dealing with urban issues.

8.5.3 Alteration in the Educational Approach to Architecture

The educational atmosphere currently in Iran in the architectural and urban planning schools, is much the same as that in France, Italy and to some extent Britain and although there have been some alterations in the syllabus and materials, there has been no significant change in the educational relations and other elements of the educational system.

Architects are still trained and educated in a way that they consider themselves as the sole authority in urban design and planning, and in urbanisation and architecture. They assume that the public facilities are for them to fulfil their desires and perform their plans and designs in accordance with their own tastes. Ultimately, a good architect is believed to be the one who is public-oriented and who uses his knowledge or at best, the ones of his colleagues to carry out his plans and designs.

Architecture, urban studies and urbanisation students have to become acquainted with the fact that their knowledge is better formed in interaction with other fields of study. When they have to decide on a project and the way for it to be well performed, they ought to ask for options and the opinions of other scholars in other fields. They should also learn to consider the public's opinion (those who are the end-users not the commissioners) of their plans and projects.

The art and the skill of an architect or an urban planner is the outcome of participation and interaction with different fields of studies, and creating public domains and spheres.

REFERENCES

Ackoff, L. Russell. (1971) "*Towards a System of Systems Concepts*", *Management Science*, 17: 661-71.

Ackoff, L. Russell. (1974) "*Redesigning the Future*", New York: Wiley, 1974.

Alexander, Christopher. (1966) *"A City is not a Tree"*, Architectural Forum, April 1965, reprinted in *Design*, No. 206, 46-55.

Alexander, Christopher. (1970) "*Notes on the Synthesis of Form*", Cambridge: Harvard University Press.

Alexander, Christopher. (1977) *"A Pattern Language"*, New York: Oxford University Press.

Alexander, Christopher. (1979) *"The Timeless Way of Building"*, New York: Oxford University Press.

Alexander, Christopher. (1981) "*Beyond Humanism*", interviewed by Howard Davis, Journal of Architectural Education, 35 (1), 18-24.

Alexander, Christopher. (1987) *"A New Theory of Urban Analysis"*, New York: Oxford University Press.

Anderson, Åke E. (1985) "*Kreativitet - Storstadens framtid*", Prisma/ Regionplanekontoret, Stockholm.

Asplund, Johan (1992) *"Storstäderna och det forteanska livet"*, Bokforlaget Korpen, Göteborg.

Asplund, Johan (1991) "*Essä om Gemeinschaft och Gesellschaft*", Bokförlaget Korpen, Göteborg.

Asplund, Johan (1987) "*Det sociala livets elementära former*", Bokförlaget Korpen, Göteborg.

Asplund, Johan (1983) "*Tid, rum, individ och kollektiv*", Liber förlag, Stockholm.

Bahrambeygui, H. (1977) "*Tehran: An Urban Analysis*", Tehran: Sahab Book Institute.

Bashiriyeh, Hossein. (1984) "*The State and Revolution in Iran 1962-1982*", New York: St. Martin's Press.

Batty, Michael (1991) *"Cities as Fractals - Simulating Growth and Form"* in Crilly, A. J., R. A. Earnshaw & H. Jones: *Fractals and Chaos,* Springer Verlag, New York.

Benevolo, Leonardo (1968) "*Storia dell'Architettura del Rinascimento*", Giuseppe Laterza & Figli. (English edition: *"The Architecture of the Renaissance"* Routledge and Kegan Paul, London 1973.

Bentley, Ian. (1999) *"Urban transformations: power, people and urban design"*, London; New York: Routledge.

Benjamin, Walter (1982) "*Das Passagen-Werk*", Suhrkamp Verlag, Frankfurt am Main (Swedish edition: *Paris, 1800 - talets huvudstad - Passagearbetet,* Symposion bokförlag, Stockholm 1990 - in 3 vols.).

Berman, Marshall (1982) "*All That Is Solid Melts into Air - The Experience of Modernity*", New York: Verso.

Berreman, G. D. (1973) *"Scale and Social Relation"*, Current Anthropology 19 (2), 225-245.

Berreman, G. D. (1968) *"General System Theory: Foundations, Development, Applications"*, New York: George Braziller.

Berreman, G. D. (1964) *"The world of science and the world of value"*, in Teachers' College Record, (65), 495-507.

Blunden, W.R. (1973) *"The Land-Use Transport System"*, Great Britain.

Boulding, Kenneth E. (1956) *"General Systems Theory: The Skeleton of Science"*, in *Management Science*, 2 (3), 197-208.

Bruyn, Severyn (1996) *"The Human Perspective in Sociology: the Methodology of Participant Observation"*, Englewood Cliffs, NJ: Prentice Hall.

Bryman, Alan. (1992) *"Quantity and Quality in Social Research"*, London: Routledge.

Buck-Morss, Susan (1989) *"The Dialectics of Seeing Walter Benjamin and the Arcades Project"*, Cambridge, Mass.: MIT Press.

Castells, Manuel (1972) *"La Question Urbaine"*, Francois Maspero, Paris. (English edition: *The Urban Question*, 1977).

Chadwick,G. (1971) *"A System View of Planning"*, Oxford: Pergamon Press.

Davis, Ian. (1988) *"Some Comparison of Reconstruction after Wars and Natural Disasters"*, Contribution to the first York Workshop on Settlement Reconstruction Post-War, 16-17 May 1988, I.A.A.S., Kings Manor, York University, England.

Editors, 1972, *"Anthropies: Public Participation in Decision Making"*, in Ekistics, No. 201, August 1972, pp.70-72.

F.L.Polle, V. (1996) *"Planning urban Services in Developing Countries"*, ITC Journal 1996-1, special Habitat II issue, pp.64-69.

Ferguson, F. (1975) *"Architecture, Cities and the Systems Approach"*, New York: Braziller.

Fisher, Michael. (1980) *"Iran: From Religious Dispute to Revolution"*, Cambridge: Harvard University Press.

George, F. (1979) *"Philosophical Foundation of Cybernetics"*, Tunbridge Wells: Abacus.

Ghomashchi, Vahid. (1998) *"Urban Regeneration Through Cultural Values: A Normative Approach"*, Unpublished PhD thesis. University of Newcastle- upon-Tyne, England.

Giddens, A. (1991b) *"Structuration Theory: Past, Present, and Future"* in Bryant, C.G.A. and Jary, D. (eds.) *Giddens' Theory of Structuration: A Critical Approach*, 201-221, London: Routledge.

Giedymin, J. (1975) *"Antipositivism in Contemporary Philosophy of social science and Humanities"*, in *British Journal for the Philosophy of Science*, 26 (4), pp. 275-301.

Gleick, James: (1987) *"Chaos - Making a New Science"*, Viking Penguin.

Gottdiener, M. & Lagopoulos, Alexandros Ph. (1986) *"The City and the Sign, An Introduction to Urban Semiotics"*, New York: Columbia University Press, (contains works of i.e. Greimas, Eco, Barthes, Boudon, Choay - the oldest from 1965).

Greed, C. (ed.) (1999) *"Social Town Planning"*, London: Routledge.

Gropius, Walter. (1926) *"Principles of Bauhaus Production"*, in: Ulrich Conrad's (ed), *Programmes and Manifestos on 20th Century Architecture*, London.

Grönlund, Bo (1993b) *"Den besværlige Urbanitet"*. Indlæg på Dansk Byplanlaboratoriums Byplanhistoriske seminar d. 15.6.1992 om Byens offentlige rum. Udkommer som byplanhistorisk note i Byplanhistorisk udvalgs skriftserie, Dansk Byplanlaboratorium, København.

Habermas, Jürgen (1988) *"Kommunikativt handlande - texter om språk, rationalitet och samhälle"* ed. Anders Molander, Daidalos förlag, Göteborg.

Habermas, Jürgen (1981) *"Theorie des Kommunikativen Handelns"*, Suhrkamp Verlag, Frankfurt am Main. (English editions: *The Theory of Communicative Action,* vol. 1, London: Heinemann, 1984 and vol. 2, Cambridge: Polity Press, UK, 1987).

Habitat. (1987) *"A New Agenda for Human Settlements"*, Report of the Executive Director, HS/C/10/2, 16 February 1987.

Habitat. (1987) *"Shelter and Services for the Poor - A Call to Action"*, Report of the Executive Director. HS/C/10/3, 4 February 1987.

Habitat. (1985) *"Community Participation in Squatter Settlement Upgrading"*, Nairobi, Kenya.

Habitat. (1984) *"Community Participation in the Execution of Low-Income Housing Projects"*, Nairobi, Kenya.

Headly,P. [et al.] (1993) *"Managing Cities, The New Urban Content"*, Chichester: Wiley Press.

Hillier, Bill and Leaman, A. (1972-73) *"Structure, System, Transformation"* in *Transaction*, Vol. 9. Bartlett Society, University College London.

Hillier, Bill and Hanson, Julienne (1984) *"The Social Logic of Space"*, Cambridge: Cambridge University Press.

Hillier, Bill. (1972) *"Knowledge and Design"*, in RIBA Intelligence Unit, Musgrove, John: in Mitchell, W.J. Environment Design: Research and Practice, EDRA3, University of California.

Hillier, Bill. (1989) *"The Architecture of the Urban Object"*, *Ekistics,* vol.56, no. 334/335.

Hourcad, B. and Adle, C. (1992) *"Tehran Capitale, Bicenteraire"*, Paris-Tehran: Institut Francais de Recherche en Iran.

Irvine, Sandy, and Ponton, Alec (1988) *"A Green Manifesto: Policies for a Green Future"*, London: Optima Publishers.

Jacobs, Jane (1961) *"The Death and Life of Great American Cities - The Failure of Town Planning"*, Penguin Books, Harmondsworth.

Johnson, Mark (1987) *"The Body in the Mind -The Bodily Basis of Meaning, Imagination, and Reason"*, Chicago: University of Chicago Press.

Krier, Rob (1979) *"Urban Space"*, London: Academy Editions, (First published in German language in1975).

Kohler, W. (1947) *"Gestalt psychology: an introduction to new concepts in modern psychology"*, New York: Liveright Pub.

Lakoff, George and Johnson, Mark (1980) *"Metaphors We Live By"*, Chicago: University of Chicago Press.

Le Corbusier (1973) *"The Athens Charter"*, NewYork: Grossman Publishers.

Lefebvre, Henri (1974): *La production de l'éspace,* Paris : Editions Anthropos, (English edition: *The Production of Space,* Oxford: Blackwell,1991).

Lefebvre, Henri (1968) *"Le droit* a *la ville",* Paris : Editions Anthropos.

Levineson, G. (1995) *"Artificial Life: Biotechnology of the 21st Century", Biotechnology* (13):122-123.

Lynch, K. (1981) *"Good City Form"*, Cambridge, Mass.: MIT Press

Lynch, K. (1960) *"The Image of the City",* Cambridge, Mass., MIT Press.

Madanipour, A. (1998) "*Tehran",* Chichester: John Wiley & Sons.

Mann, P. H. (1965) "*An Approach to Urban Sociology",* London: Routledge & Kegan Paul.

Martin, L. and March L. (ed.) (1972) *"Urban Space and Structures",* Cambridge: Cambridge University Press.

Mcloughlin, J. B. and Palmer, D. (1996) *"Land Registration and development", ITC Journal* 1996-1, Special Habitat II Issue, pp.10-17.

Mcloughlin, J. B. and Webster J. (1970) *"Cybernetic and General System Approaches to Urban and Regional Research"* in *Environment and Planning*, Vol. 2, in Hillier, B. and Leaman, A. (1972-73) "Structure, System, Transformation", in *Transaction,* Vol. 9, Bartlett Society, University College London.

Mcloughlin, J. B. (1973) *"Control and Urban Planning"*, London: Faber & Faber Limited.

Motawet, Sharif (1996) *"Post-war Urban Reconstruction Policy in Iran, Case Study: Khorramshahr".* Unpublished PhD thesis. Edinburgh College of Art, Heriot-Watt University.

Mumford, Lewis (1942) *"The Social Foundation of Post War Building"* London: Faber & Faber.

Nasr, Seyyed Hossein. (1968) *"Man and Nature: The spiritual Crisis in Modern Man",* London: George Allen & Unwin Ltd.

Parsons, Talcot (1952) *"Social System"*, New York: Free Press.

Rapoport, A. (1967) *"Whose Meaning in Architecture?"* Interbuild Area, October 1967: 44-47.

Rapoport, A. (1970) *"Modern Systems Theory - An Outlook For Coping With Change",* in *General Systems*, Vol. 15:15-25.

Rapoport, A. and Hawkes, R. (1970) *"The Reception of Urban Complexity"* in *AIP Journal*, March 1970:106-111.

Rapoport, A. (1973) *"Images, Symbols and Popular Design", International Journal of Symbology*, No.4:1-12.

Rapoport, A. (1975) *"Toward A Redefinition of Density", Environment and Behavior* 7(2),133-158.

Rapoport, A. (Date unknown) "*Culture and Built Form, Reconside Ration"*, (unknown publisher), pp.157-174.

Rapoport, A. (Date unknown), *"Vernacular Architecture and the Cultural Determinants of Form"* (unknown publisher), pp.283-305.

Reif, B. (1973) *"Models in Urban and Regional Planning",* London: Leonard Hill Books.

Reiss, Albert (1971) *"Systematic Observation of Natural Phenomena"*, in *Sociological Methodology*, San Francisco: Jossey Bass.

Sabri, R. C. (1997) *"Cultural Heritage in Activity Planning Process"*, Tehran: TETCO.

Steil, Lucien (1987) *"Tradition and Architecture"*, in *Architecture Design*, (57): 5-6.

Sullivan, A. O. (1989) *"Urban Economics"*, New York: McGraw Hill.

Tonnies, Ferdinand (1957) *"Community and Society: Gemeinschaft und Gesellschaft"*, The Michigan State University Press.

Tonnies, Ferdinand (1970) *"Conceptions of Community"*, in Worsely, Peter (1970) *"Modern Sociology"*, Penguin Books, England.

Turner, T. (1996) *City as Landscape, "A post-Postmodern View of Planning and Design"*, (trans. By Farshad Nouriyan), Tehran: Urban Planning and Processing Company.

United Nations (1975): *"Popular Participation in Decision Making"*, New York.

United Nations, Department for Policy Co-ordination and Sustainable Development *"Earth Summit +5: Special Session of the General Assembly to Review and Appraise the Implementation of Agenda 21, 1997"*, New York < http:// www.un.org/ dpcsd >, (23-27 June 1997).

Von Bertalanffy, Ludwig. (1965): *"On the Definition of the Symbol"*, in Psychology and the Symbol: An Interdisciplinary Symposium, J. R. Royce (ed.) New York: Random House.

Von Bertalanffy, Ludwig. (1973) *"General System Theory"*, Great Britain.

Zedlitch, Morris (1962) *"Some Methodological Problems of Field Studies"* in *American Journal of Sociology* (67), No.5.

Zevi, Bruno (1960) "Biagio Rosetti - architetto ferrarese - il primo urbanista moderno europeo", Torino: Guilio Einaudi editore, 1960.

PERSIAN REFERENCES

Adle, Chahryar et Hourcade Bernard (1996) *tehran pāytaxt-e devist sāle* (Teheran Capitale bicentenaire), Institut Francaise de Recherche en Iran, Paris- Tehran.

Aestheticizing Organization of the Municipality of Tehran (1998) "*majmo'e maqalate tarahi-ye šahri*", (Essays on Urban Designing, vol.1, Winter 1998) Aestheticizing Organization of the Municipality of Tehran, Tehran.

Ahmadi, B. (1994) "*modernite va andise eqtesādi*", (Modernity and Economic Thought), Nashre Markaz Publications, Tehran.

Ahmadi, B. (1998) *"modernite va andise eqtesādi"*, (Modernity and Economic Thought), Nashre Markaz Publications, Tehran.

Ahmadi, H. & Chahardowli Habibollah (1997) "*selsele maratebe šahri*", (Urban Hierarchy), Centre for Urban Planning Studies, Tehran.

Ahmadi, H. (1997) "*barnāmerizi-ye šahri az ta'roz to hamāhangi*", (Urban Planning from Dissonance to Harmony), Centre for Urban Planning Studies, Nashre Markaz Publications, Tehran.

Alexander, Christopher (1997) *"Domains of Collective and Private Lives: towards a Humanist Architecture"*, (trans. by Manouchehr Mozayeni), Tehran University Press, Tehran.

Alexander, Christopher. *"memāri va rāze Jāvdānegi: rāh-e bi zamāne sāxtan"*, (The Secret of Timeless Architecture: the Timeless of Building). Tran. by Mehrdad Qayyoomi Bidhendi. Tehran, Shahid Beheshti University, 1381.

Amakchi, H. (2001) bahrevari va taxrib dar sāxtemanhaye maskuni, (Productivity and Destruction in Residential Buildings)"*Modiriyate Šahri*". 2(7): 46-53.

Amakchi, H. [et al.] (1994) "*A New Theory of Urban Design*", (trans. by Mohammad Taqizadeh Motlaq) Nashre Tose'e Publications, Tehran.

Amiryarahmadi, M. (1999) "*be suye šahrsaziye ensangarā*" (Towards a Humanist Urbanism), Urban Planning and Processing Company, Tehran.

Andranovich, G. D., and G. Riposa (1997) "*Levels of Analysis in the Strategic Urban Research*", (trans. by Seyed Mahmoud Nejati), Centre for Urban Planning Studies, Tehran.

Armaki, Āzod, *"andiseh nosāzi dar Iran"*, (Renovation thinking in Iran), Tehran, University of Tehran Press, 1380.

Athari, K. (2001) "*halle nāsāzvāre ye mošārekat va taxasos*", *(A Solution to Participation Specialization Paradox)* Modiriyate Šahri. 2(5): 16-21.

Attar, Farid al-Din Muhammad ibn Ibrahim (1977) *"mantiq al-tayr"*, (The Conference of the Birds) Nashre Ketab, Tehran.

Bacon, Edmund N. (1997) "*Design of Cities*", (trans. By Farzaneh Taheri) Centre for Iranian Urban Planning and Architecture Studies and Researches, (Unknown Place).

Bahramsoltani, K. (1995) "*karborde me'yarhaye asayeše sowti dar barnameriziy va tarahi-ye šahri*", (Application of Noise Comfort Criteria in Urban Planning and Designs) Centre for Iranian Urban Planning and Architecture Studies and Researches, Tehran.

Bahrainy, H. "tahlil-e fazāhaie Šahri dar rabeteh ba olguihaiye raftariye estefādekonandegan va zavabeti barāie tarahi", (Urban Space Analysis in Relation to User' Behavior Pattern). Tehran, University of Tehran Press, 1375, 265 p. Serial no. 9941.

Bahreini, S.H. (1996) *"tahlile fazahaye šahri dar rabete bā olguhaye raftari estefadekonandegan va zavabeti baraye tarahi"*, (Anlaysing Urban Spaces in Connection with the Behavioral Patterns of the Users and Design Principles) Tehran University Press, Tehran.

Bahreini, S.H. (1998) *"farāyande tarahiye šahri"*, (The Process of Urban Designing) Tehran University Press, Tehran.

Bahreini, S.H. (1999) *"tajadod, farātajadod va pas az n dar šahrsāzi"*, (Modernism, Postmodernism and after that in Urban Design and Planning) Tehran University Press, Tehran.

Bastie Jean & Dezert Bernard (1998) "*La Ville*", (trans. by Ali Ashrafi) University of Arts, Tehran.

Bavand & Geno Consulting Engineers (1995) "*Planning for the Future of London*", (Development Plan for Greater London) (trans. by Bavand & Geno Consulting Engineers) Tehran.

Bayan, A. (1994) "*zedegi čist (negareše sistemi bār hayat)*", (What is Life? A Systemic Approach towards Existence) Nashre iran, Tehran.

Beer, Anne R. *"barnāmeh riziye mohiti barāie tose'eye zamin, rāhnamāiy barāie barnāmeh rizi va tarrāhie mahalie pāiedar"*, (Environmental planning for Site Development: A manual for Sustainable Local Planning and Design), Tran. by H.Bahrainy and C. Higgins. Tehran, University of Tehran Press, 1381, 503 p. Serial no. 4495.

Beneuelo, Leonardo (1976) "*Le Origini Dell Urbanistica Moderna*", (trans. by Mehdi Kosar) Tehran University Press, Tehran.

Bertalanffy, Ludwig von (1995) *"Perspectives of General Systems Theory"*, (trans. by Kiomars Pariyani) Tondar, Tehran.

Beski, S. (1997) gahšomār-e-tahavollate šahrsāzi ye jadid dar iran, (Choronology of Changes in Modern Iranian Urban Planning) "*Ābādi*". 7(25): 40-54.

Burton, E., Williams, K., & Jenk, M. (eds.) (1996) "*Compact City and Urban Sustainabillity*", in The Compact City, a Sustainable Urban Form? London: E & FN Spon. (a Persian translation by Barooghi, F. in Modiriyate Šahri. 1(4): 14-23)

Centre for Iranian Urban Planning and Architecture Studies and Researches (1995) "*tarhe majmo'eye šahriye tehran va šahrhaye atrafe ān (marhaleye aval):gozareš šomareye yek- oza'e tabi'I va tozi' va parakandegiye kanunhaye jam'iyatva fa'aliyat*", (A Collection of Projects for the City of Tehran and the surrounding Towns (1st Phase): Report No.1- Natural Condition and Distribution of Population and Activity Nuclei) Centre for Iranian Urban Planning and Architecture Studies and Researches,(unpublished), Tehran.

Centre for Studies and Cultural Co-ordination, Supreme Council of Culture & Arts (1976) "*atlase farhagi-ye iran*", (Cultural Atlas of Iran) Tehran.

Centre for Urban Planning and Studies of the City of Tehran (1994) *"tahlile vaz'iyate fazaye sabz va parkha dar šahre Tehran"*, (Condition Analysis of the Public Parks in the City of Tehran), (Unpublished), Tehran.

Centre for Urban Planning and Studies of the City of Tehran (1996) *"tarhaye mehvariye barnameye avale šahrdariye Tehran"*, (Pivotal Projects for the 1st Programmes of the Municipality of Tehran 1996-2001) Centre for Urban Planning Studies, Tehran.

Centre for Urban Planning and Studies of the City of Tehran (1997) *"Habitat 2: a Conference Report", (Urban Population – Life in City – vol. 1)* Centre for Urban Planning Studies, Tehran (Unpublished).

Centre for Urban Planning and Studies of the City of Tehran (1997) *"ahdāf,xatemašyha va siyasatha mondaraj dar fasle 'omrane šahri barnameye panj saleye dovome tose'eye jomhuriye eslamiye iran"*(Objectives, Strategies and Policies in the Urban Development Chapter of the 2nd Five Year Development Plan of Islamic Republic of Iran), Centre for Urban Planning Studies, Tehran.

Chadwick, G. [*et al*] (1986) *"The Role of Evaluation in the Process of Regional and Urban Planning and its Current Techniques"*, (trans. by Zahra Gharagozlu), Housing and Building Research Centre, Tehran.

Chermayeff, S. *"ersehhaye zendegye ejtemaei va zendegie xosusi be jānebe iek memārie ensāni", (Community and Privacy towards a new Architecture of Humanity) Tran. by M. Mozzayeni. Tehran, University of Tehran Press, 1371, 316 p. Serial No. 3954.*

Choay, Francoise (1997) *"L'urbanisme : utopies et réalités; une anthologie"*, (trans. by Seyed Mohsen Habibi) Tehran University Press, Tehran.

Churchman, Charles West (1996) *"Systems Theory"*, (trans. by Rashid Aslani), Educational Centre for Governmental Management, Tehran.

Colin, Lee (1987) *"Models in Urban Planning: an Introduction to the Application of Quantitative Models in Planning"*, (trans. by Mostafa Abbaszadegan) Jahad Daneshgahi, Tehran.

Coup, Anatole [*et al.*] (1987) *"Reconstruction Architecture"*, (trans. by Seyed Mohsen Habibi) Housing and Building Research Centre, Tehran.

Cultural Heritage Organization (2000) *"majmo'e maqalate dovomin kongere-yetarixe memari va šahrsazi-ye iran"*, (Essay Collection of the 2nd Iranian History of Architecture and Urbanism Congress 14-18 April 1999 Baam Citadel, Kerman, vol.1) Cultural Heritage Organization, Tehran.

Cultural Heritage Organization (2000) *"majmo'e maqalate dovomin kongere-yetarixe memari va šahrsazi-ye iran"*, (Essay Collection of the 2nd Iranian History of Architecture and Urbanism Congress 14-18 April 1999 Baam Citadel, Kerman, vol.1) Cultural Heritage Organization, Tehran.

De Rosany, Joel & Beishon, John (1991) *"The Method of the Systemic Thought"*, (trans. by Amir Hussein Jahambeglou), Pishbord Publications, Tehran.

Delisi, Uleary (1976) *"Transformation of the Greek Sciences to the Islamic World"*, (trans. by Ahmad Araam), Javidan Publications, Tehran.

Djait, Hichem (1993) "*Naissance de La Ville islamique*", (trans. by Abol Hassan Sarvqadam) Astane Qods, Tehran.

Dou Chong, Sen. (1998) *"Beiging: Perspectives on Preservation, Environment and Development"*, in *Cities.* Vol.15, No.1: 13-25. (a Persian translation by Alizadeh, K. in Modiriyate Šahri. 1(3): 96-109)

Durand, Daniel (1991) "*Theory of Systems*", (trans. by Mohammad Yamani Douzi Sarkhabi) Enghelab Eslami Publications, Tehran.

Falamaki, M. M. (1988) "*farabi va seire šahrvandi dar iran*", (Farabi and the Process of Citizenship in Iran) Noghre Publications, Tehran.

Falamaki, M. M. (1992) *"šeklgiriye me'mari dar tajarobe iran va qarb"*, (Formation of Architecture in the Experiences in Iran and the West) Nashre Faza, Tehran.

Falamaki, M. M. [*et al.*] (1990) "*me'mari va mosiqi*",(Arcitecture and Music) Nashre Faza, Tehran.

E'tesam, I. (1998) tarhhāye maskan dar bāft-e qadimiye šahr, (The Design of Housing Units in the Old Urban Contexts)*"Honarhaye ziba"*. Spring 1998, No.3: 54-61.

Farabi, A. N. (1982) "*'ara'e ahle madineye fazele*", (The Ideas of the Believers of the Perfect City) (trans. by Seyed Jafar Sajadi) Tahouri Publications, Tehran.

Farshad, M. & Firouzbakhsh, K. (1979) "*mohandesi-ye tarbiat*", (Education Engineering) Shiraz University Press, Shiraz.

Farshad, M. & Firouzbakhsh, K. (1983) "*negareše sistemi*", (Systemic Approach) Amir Kabir Publications, Tehran.

Firooze Jadali (2000) "*The impact of the Navvab Highway and the surrounding construction works on the outward form of the city of Tehran*", (an unpublished university project kept in the library of the Faculty of Fine Arts Tehran University, Tehran).

Gerāntab', Q. (1997) tarhhāye šahri, hayāte madani, (Urban Design and Civil Life)"*Ābādi*". 7(25): 25-29.

Ghamami, M. (2001) rābeteye šahr va mantaqe ye tehran; tangnaha va zaruratha, (The Relation Between The City and The Region of Tehran; Restrictions and Neccesities)"*Modiriyate Šahrī*". 2(6): 36-44.

Gharashi, Mohammad ibn Ahmad (1968) "*ā'ine šahrdari dar qarne haftome hejrī*", (The Way of Governing a City in the 7th Century AH) (trans. by Jafar Shoār) Ministry of Culture and Higher Education, Tehran.

Gilbert, Alan & Gagler, Joseph (1996) "*Cities, Poverty and Development: Urbanism in the Third World*", (trans. by Parviz Karimi Naseri) The General Office of Public and International Relations, Municipality of Tehran, Tehran.

Gitashenasi Institute (1990) *"atlase kāmele šahre Tehran"*, (A Complete Atlas of Tehran), Tehran.

Ghiyasi, N. (1994) *tahavole mafāhime nazari va raveshaye tahliliye šahri* (The Evolution of Urban Theoretical Concepts and Analytical Methods) Tehran, *Ābadi* (4) 14 Autumn

GoodChild, B. (1994) "*Housing Design, Urban Form and Sustainable Development*", in Town Planning Review. Vol.65, No.2, (a Persian translation by Asadi, I. in Modiriyate Šahri. 1(4): 50-59.

Habibi, M. Maghsoudi *"marremat-e šahri: taārif, nazarieha, tajarob, manšourha va gatenāmehai-e jahāni, ravešha va eqdamat-e šahri"*, (Urban Renovation: International definitions, Theories, Experiences, Charters and Declarations, Urban Methods and Operations). Tehran, University of Tehran Press, 1381, 218 p. Serial no. 4650.

Habibi, S.M. (1992) tehran, pāytaxte qājār: noxostin pežvāke modernite dar iran, (Tehran, the Capital of The Qajar: The First Resonance of Modernity in Iran) *"Goft-o-gu"*("Dialogue", a quarterly review) No.3: 138-151.

Habibi, S.M. (1998) maktab-e-esfahan dar šahrsāzi, (Isfahan School of Urbanism) *"Honarhaye ziba"*. (Journal of the Faculty of Fine Arts, University of Tehran) Spring 1998, No.3: 48-53.

Habibi, S.M. (1999) *"az šār ta šahr (tahlili tarixiaz mafhume šahr va simaye kalbodi-ye ān"*, (A Historical Analysis of the Concept of City and its Physical Appearance), Tehran University Press, Tehran.

Hall, A.D. & R.E. Fagen (1996) *"Definition of System"*, (trans. by Davood Salmani) the Institute of Commercial Studies and Researches, Tehran.

Hall, Peter. (2001) Systemic Approach in Urban and Reginal Plannin, (a Persian translation by Taqizadeh Motlaq, M.) *"Modiriyate Šahri"*. 2(7): 60-71.

Haj Yoosefi, A. (2001) barnāmeriziye mantaqe'i dar iran az āqāz ta daheye 1350, (Regional Planning in Iran, From the Beginning to 1350s) *"Modiriyate Šahri"*. 2(6): 6-18.

Hamidi, M. [*et al*] (1997) *"ostoxanbandi-ye šahre Tehran"*, (Structural Framework of the City of Tehran (Vol. 1) Concepts and Samples), TETCO.

Hamidi, M. [*et al*] (1997) *"ostoxanbandi-ye šahre Tehran"*, (Structural Framework of the City of Tehran (Vol. 2) Perceiving the current Situation), TETCO.

Hamidi, M. [*et al*] (1997)*"ostoxanbandi-ye šahre tehran"*, (Structural Framework of the City of Tehran (Vol. 3) An Assessment of Organizing Assumptions), TETCO.

"Harvard Group"Solution for Designing the City of Tehran (2002) (trans. by Farshad Nouriyan) Urban Planning and Processing Company, Tehran.

Harvey, David (1997) *"Social Justice and the City"*, (trans. by Farokh Hesameeyan [et al.]) Urban Planning and Processing Company, Tehran.

Ibn Khaldoun Abd Al Rahman (1996) *"Ibn Khaldoun Introduction (vol.2)"*, (trans. by M. Parvin Gonabadi) Elmi Farhangi Publications, Tehran.

Ibn Khaldoun Abd Al Rahman (1996) *"Ibn Khaldoun Introduction (vol.1)"*, (trans. by M. Parvin Gonabadi) Elmi Farhangi Publications, Tehran.

Imāni Jājarmi., H. (2000) *"āshna'i ba raveše delfi va karbord ān dar tasmimgiry"*, (An Introduction to Delphi Method and Its Application in Decision-making) Modiriyate Šahri. 1(1): 35-39.

Imāni Jājarmi., H. (2001) sarmayehaye ejtema'i va modiriyate šahri, (Social Capital and Urban Management) *"Modiriyate Šahri"*. (a quarterly journal of urban management and planning) 2(7): 34-45.

Iqbal, M. (1964) "*Collection of Poems*", Sana'I Publications, Tehran.

Iqbal, M. (1979) "*The procedure of Philosophy in Iran*" (trans. by A.H. Ariyanpoor), Amir Kabir Publications, Tehran.

Iqbal, M. (Unknown date) "*Reconstruction of Religious Thought in Islam*", (trans. by Ahmad Araam), Centre for Islamic Researches and Studies, Tehran.

Jafari, M.T. (1975) "*ide'ale zendegi va zendegi-ye ide'al*", (The Ideal of Life and the Ideal Life), Arman Publications, Tehran.

Jafari, M.T. (1978) "*harkat va tahavol az didgahe qor'an*", (Koran's Vision on Movement and Evolvement), Qalam Publications, Tehran.

Jodat, M.R. (1995) *āšena'i ba me'mari-ye mo'āser* (An Introduction to Contemporary Architecture) Faculty of Urbanism and Architecture, Shahid Beheshti University, Tehran (Unpublished)

Kātanizi, A. *"raveshāie elmiye tahlil-e masāyel-e šahri"*. (Scientific Methods of Urban Problems Analysis), Tran. by M.Mozayyeni. Tehran, University of Tehran Press, 1371, 441 p. Serial no. 4825.

Kesiades, Constantine (unknown date) "*The Architecture of the Evolution Phase*", (trans. by Mahmoud Razjooyan) Melli University Press, Tehran.

Khalili Araghi, M. (1988) "*šenaxte 'avamele mo'aser dar gostareše biravi-ye šahre Tehran*", (Perceiving the Influential Factors in the Unrestrained Expansion of the City of Tehran) Tehran University Press, Tehran.

Khatami, S.M. (1994) "*az donyaye šahr to šahre donya*", (From the World of City to the City of the World), Nashre Nei, Tehran.

Khatam, A. (2001) "*fa'āliyate sāzmanhaye qeire dowlati dar zendegiye šahri ye iran*", (The Activity of Non-governmental Organizations in Urban Life of Iran) Modiriyate Šahri. 2(5): 22-28.

Kiani, Y. (1986) "*šahrhaye iran*", (Cities of Iran (vol. 4)) Jahad Daneshgahi Publications, Tehran.

Lynch, Kevin "Simāie šahr", (The Image of the City), Tran. by M. Mozayyeni. Tehran, University of Tehran Press, 1372, 331 p. Serial no.4536.

Lynch, Kevin "teoriye škle xuib-e šahr", (A Theory of Good City Form), Tran. by H. bahrainy. Tehran, University of Tehran Press, 1376, 695 p. Serial no. 4491.

Mahdizadeh, J. (2001) "*be suye šahrsaziye demokrātik*", (Towards a Democratic Urban Planning) Modiriyate Šahri. 2(5): 44-57.

Madanipour, A. (2002) "*Tehran: the Making of a Metropolis*", (trans. by Hamid Zarazvand) Urban Planning and Processing Organization, Tehran.

Mashadizadeh Dehaghani, N. (1995) "*tahlili az vižegihaye barnamerizi-ye šahri dar iran*", (An Analysis of the Characteristics of Urban Planning in Iran) Science & Technology University Press, Tehran.

Merlin, Pierre (1986) "*QUE SAIS JE ?*"(Trans. By Reza Gheisariye) Nashre Faza, Tehran.

Miess, Pierre Von, *"negāhei be mabani-e memāri: az form ta makān, hamrāh ba tahlil va qiās ba mabāni-e memarie Iran"*, (Elements of Architecture from Form to Place with Comparative Analysis of Iranian Architecture), Tran. by Simon Ayvazian. Tehran, University of Tehran Press, 1383, 286 p. Serial no. 4809.

Ministry of Housing and Urbanism & Atek Consulting Engineers (1991) *"tarhe samandehiye Tehran"*, (The Organizing Project of Tehran) Ministry of Housing and Urbanism, Tehran.

Ministry of Housing and Urbanism (1990) *"šahrhaye jadid, farhangi jadid dar šahrnešini"*, (New Cities, New Cultures in Urbanization), Ministry of Housing and Urbanism, Tehran.

Ministry of Housing and Urbanism [*et al.*] (1991) *"tarhe samandehiye Tehran"*, (The Organizing Project of Tehran) Ministry of Housing and Urbanism, Tehran.

Mohammadzadeh, T.H. (2000) *"manšur-e āten va manšur-e 2000"*, (Athen Charter and The Charter 2000) Modiriyate Šahri. 1(1):11-24.

Morin, Edgar (2000) *"Introduction a la Complexe"*, (trans. by Afshin Jahandide) Nashre Nei, Tehran.

Morris, James (1995) *"History of Urban Form before the Industrial Revolution"*, (trans. by Razieh Rezazadeh) Science & Technology University Press, Tehran.

Motahari, M. (1978) *"moqadame'i bar jahanbibi-ye eslami; jahanbini-ye tohidi"*, (An Introduction to the Islamic Worldview; Unity Worldview) Sadra Publications, Qom.

Mozayyeni, M. *"maqālāti dar bābe šahr va šahrsāzi"*, (Issues on Cities and City Planning), Tehran, University of Tehran Press, 1381, 396 p. Serial no. 4549.

Mozayyeni, M. (1997) naqdi bar maqale-ye shahr-e-'ām, (A Critical Review of" the Generic City by Koolhaas, Rem) *"Ābādi"* (a quarterly journal on urban planning and architecture) 7(25): 66-79.

Municipality of Tehran (1997) *"fehreste tarhha va porožehaye tehran"*, (List of Projects and Plans of the City of Tehran), Municipality of Tehran, Tehran.

Municipality of Tehran (1990-1995) *"Account (8 Volumes)"*, Municipality of Tehran, Tehran.

Nasr, S.H. (1996) *"tafakore motefakerane eslami darbareye tabi'at"*, (Islamic Thinkers on Nature) Dehkhoda Publications, Tehran.

Nejati Hosseini, S.M. (2001) *"jame'eye modern, šahrvandi va mošārekat"*, (The Modern Society, Citizenship, and Participation) Modiriyate Šahri. 2(5): 6-15.

Openheim, Norbert. *"modelhāye kārbordi dar tahlil-e masayel–e šahri va mantaqehei"*, (Applied Models in Urban and Regional Analysis), Tran. by M. Tbibian. Tehran, University of Tehran Press, 1379, 485 p. Serial no.4331

Pakzad, J. (2000) *"tarahi ye šahri dar nezame tose'e"*, (Urban Design in The Urban Development System) Modiriyate Šahri. 1(3): 30-41.

Pirnazar, M. (2000) *"jame madani čist? (tarixče mafhum va karbord ān dar kešvarha-ye jahan)"*, (What is Civil Society? Background of its Concept and Application in Countries of the World) Nashr-o-Pazhoheshe Farzan-e Rooz, Tehran.

Qarib, F. "Šabakeh ertebati dar tarrahie šabri," (Street network in Urban design), Tehran, University of Tehran Press, 1372, 180 p. Serial no. 3826

Qoddusi, M. (2001) šahrhaye majāzi va šahrsāzi ye mošarekati, (Virtual Cities and Participatory Urban Planning)"*Modiriyate Šahri*". 2(7): 90-97.

Rāzjuian, Mahmoud. "āsāyš be vasileh-e memārie-e hamsāz ba eqlim" ,(Silence by Climatic Architecture), Tehran, Shahid Beheshti University , 1367.

Rafiei, M. (1989) *"maskan, darāmad dar tehran gozašte, hal,'āyande",* (Housing and Income in Tehran; Past, Present, Future) Centre for Urban Planning and Architecture Studies and Researches, Tehran.

Rafiei, M. (1990) *"majmo'e mabahes va raveshaye šahrsazi ;eqtesad",* (The Collection of Debates and Methods of Urbanism; Economy) Centre for Urban Planning and Architecture Studies and Researches, Tehran.

Ratifications of the City Council of Tehran, (1999).

Ratifications of the City Council of Tehran, April -September (2000).

Ritzer, George (1995) *"Sociological Theory"* (trans. by Ahmadreza Gharavizade) Jahad Daneshgahi Publications, Tehran.

Roshangaran and Women Studies Publications (1991) *"ketābe Tehran"*, (Book of Tehran, vol. 1) Roshangaran and Women Studies Publications, Tehran.

Roshangaran and Women Studies Publications (1992) *"ketābe Tehran",* (Book of Tehran, vol. 2) Roshangaran and Women Studies Publications, Tehran.

Roshangaran and Women Studies Publications (1993) *"ketābe Tehran",* (Book of Tehran, vol. 3) Roshangaran and Women Studies Publications, Tehran.

Roshangaran and Women Studies Publications (1994) *"ketābe Tehran"*, (Book of Tehran, vol. 4) Roshangaran and Women Studies Publications, Tehran.

Roshangaran and Women Studies Publications (1997) *"ketābe Tehran",* (Book of Tehran, vols. 5, 6) Roshangaran and Women Studies Publications, Tehran.

Roshe, M. (Unknown date) *"The Modern Sociology of The Citizenship",* (translated by Ghorab, N.) in Modiriyate Šahri. 1(1): 25-34.

Russel E. Caflisch (Unknown date) *"Systems Method",* an annex to ta'bire qor'an (Interpretation of Koran) (trans. by Mohammad Javad Sohlani) Be'sat Publications, Tehran.

Saeidi Rezvani, N. (1997) *"negahi be raveshaye kaheše 'aludegi-ye sowti dar bozorgrahha",* (An Introduction to the Methods of Decreasing Noise Pollution in the Highways) Centre for Urban Planning and Studies, Tehran.

Salimi, J. and Nirou, S. (1999) *"tose'eye šahri va havadese qeiremoteraqebe",* (Urban Development and Unpredictable Incidents) Technical & Engineering Consulting Organization of the City of Tehran, Tehran.

Salehi, E. (2000) *"niyazsanji ye šahri: mo'arefi ye nazariye ye Leonard. J. Duhl"*, (Presenting Leonard.J.Duhl's View) Modiriyate Šahri. 1(1): 66-69.

Sarafi, M. (2001) *"šahre pāydār cist?"* (What is a Sustainable City ?) Modiriyate Šahri. 1(4): 6-13.

Sāremi, A. (1995) modernite va rahavardhaye ān dar me'māri va šahrsazi ye iran, (Modernity and its impact on Iran's Architecture and Urbanism) No.10: 57-68.

Shariati, A. (1989) *"tarixe tamadon",* (History of Civilization) Ghalam Publications, Tehran.

Shahidi, M.H. (1991) *mabāni-ye nazariye 'omumi-ye sistemha* (The Application of General Systems Theory Principles in Urban and Regional Planning) Shahid Beheshti University, Tehran

Shafee,H. (2000) *"postmodernism dar šahrsazi"*, (Postmodernism in Urban Planning) Modiriyate Šahri. 1(1): 70-74.

Shafee,H. (2001) *"modiriyat dar sathe mahalli va tose'eye pāydār"*, (Local Management and Sustainable Development) Modiriyate Šahri. 1(4): 34-79.

Sheykhi, M. (2001) barnāmeriziye mantaqe'i dar iran (1360-1380), (Regional Planning in Iran (1360-1380))*"Modiriyate Šahri"*. 2(6): 18-25.

Sheykhi, M. (1999)*"honar"*, (The Arts) Chapakhsh, Tehran.

Shirzad, M. (1978) *"tohid va tafakore sistemi"*, (Unity and the Systemic Thought) Kanoon-e Nashr-e Hanif, Tehran.

Social & Cultural Deputy of the Municipality of Tehran (1994) *"moqadame'i bar tarhe jame'e farhangi-ye Tehran"*, (An Introduction to the Comprehensive Cultural Project of Tehran, 21 volumes) Social & Cultural Deputy of the Municipality of Tehran, Tehran.

Sohrevardi, Shahab-o-din (1979) *"hekmat-ol'ešraq"*, (Illuminative Wisdom) (trans. by Seyed Jafar Sajadi) Tehran University Press, Tehran.

Specialist Council of the City of Tehran (1992-93) *"nazarat va didgahha"*, (Opinions & Views) Technical and Engineering Consulting Organization of the City of Tehran, Tehran (Unpublished).

Specialist Council of the City of Tehran (1993) *"nazarat va didgahha"*, (Opinions & Views) Technical and Engineering Consulting Organization of the City of Tehran, Tehran (Unpublished).

Specialist Council of the City of Tehran (1994)*"nazarat va didgahha"*, (Opinions & Views) Technical & Engineering Consulting Organization of the City of Tehran, Tehran (Unpublished).

Specialist Council of the City of Tehran (1995) *"nazarat va didgahha"*, (Opinions &.Views) Technical & Engineering Consulting Organization of the City of Tehran, Tehran (Unpublished).

Specialist Council of the City of Tehran (1996) *"nazarat va didgahha"*, (Opinions &.Views) Technical & Engineering Consulting Organization of the City of Tehran, Tehran (Unpublished).

Specialist Council of the City of Tehran (1997) *"nazarat va didgahha"*, (Opinions & Views) Technical & Engineering Consulting Organization of the City of Tehran, Tehran (Unpublished).

Specialist Council of the City of Tehran (1998) *"nazarat va didgahha"*, (Opinions & Views) Technical & Engineering Consulting Organization of the City of Tehran, Tehran (Unpublished).

Stones, Rob (2000) *"Key Sociological Thinkers"*, (trans. by Mehrdad Mirdamadi), Nashre Markaz Publications, Tehran.

Sultanzade, H. (1992) *"fazahaye šahri dar bafthaye tarixi-ye iran"*, (Urban Spaces in the Historical Contexts of Iran), the Bureau of Cultural Researches (associated with Cultural and Cinema Centres) in Co-operation with the Municipality of Tehran, Tehran.

Supreme Council of Urbanism and Architecture (2000) *"saxtemanha-ye boland dar tehran; zavabet va makanyabi"*, (High Buildings in Tehran, Principles and Locations) (ratified on 05.02.2001) Urban Planning and Processing Company, Tehran.

Supreme Research Institute in Planning and Development, Planning and Budget Organization (1994) "*The Counselling Group Report 1 of the progress in the comprehensive study of Transportation and Traffic in the City of Tehran*", an unpublished report kept in the library of Comprehensive Study of Transportation and Traffic in the City of Tehran, Tehran.

Talebi, J. (1997) *"rahnamaye tarahi memari-ye saxtemanha-ye bolande maskuni"*, (Directions on the Design and Architecture of High Residential Buildings) Centre for Housing and Building Researches, Tehran.

Taleghani, M. (1990) "*motale'ate jamešenaxti šahre Tehran"*, (Sociological Studies of the City of Tehran (Vol.1), Institute for Cultural Studies and Researches, Tehran.

Tavasoli, G.A. (2000) "*nazariyehaye jameshenasi"*, (Sociological Theories) SAMT, Tehran.

Tavassoli, G. *"mošārekat-e ejtemāei dar šarāiete jame'eye ānomik: rabeteh-e āsibha va enherāfat-e ejtemaey ba mošārekat-e ejtemaei"*,(Social Participation in Conditions of Anomic Societies). Tehran, University of Tehran Press, 1383.

TETCO (1996) "*barasiye tavāne zistmohiti-ye darehaye šomale Tehran"*, (An Investigation into the Environmental Potentiality of the Valleys of the North of Tehran), Tehran. (Unpublished.)

TETCO (1996) "*barasiye tavāne zistmohiti-ye dašthaye jonube Tehran"*, (An Investigation into the Environmental Potentiality of the plains of the South of Tehran), Tehran. (Unpublished.)

TETCO (1997) "*pārk va pārksazi dar Tehran"*, (Park and Park Planting in Tehran) Technical & Engineering Consulting Organization of the City of Tehran, Tehran.

TETCO [*et al*] (1993) *"do didgah dar motale'ate jāme'e haml-o-naqle šahrha"*, (Two Views in the Comprehensive Studies of Urban Transportation) Technical & Engineering Consulting Organization of the City of Tehran, Tehran.

TETCO (1995) "*mabani-ye barnamerizi-ye farhange šahri baraye šahre Tehran"*, Technical & Engineering Consulting Organization of the City of Tehran, Tehran.

TETCO (1996) "*moruri bar nahveye barxord tarha-ye šahri ba bafte kohane šahr Tehran"*, (A Review of the Ways the Urban Projects deal with the Old Context of the City of Tehran) Technical & Engineering Consulting Organization of the City of Tehran, Tehran. (Unpublished.)

TETCO (1991) "*motale'ate samandehi-ye sanaye'e Tehran"*, (Studies on Organizing the Industrial Units, 7 Volumes) Technical & Engineering Consulting Organization of the City of Tehran, Tehran. (Unpublished.)

TETCO (1997) "*nezame hedayat va kontorole tose'eye tehrane bozorg"*, (Directing & Controlling System of the Development of Greater Tehran; a conceptual Approach) Technical & Engineering Consulting Organization of the City of Tehran, Tehran.

TETCO (1997) "*Guidelines Presented by the Local Government of the Metropolis of Tokyo for the Development of International Policy"*, (trans. by Mehdi Babaei Ahari), Technical & Engineering Consulting Organization of the City of Tehran, Tehran. (Unpublished.)

TETCO (1997) "*siyasatha va me'yarhaye samandehi marakeze hozehaye šahre Tehran"*, (Organizing Criteria and Policies for the District Centres of the City of Tehran), Technical & Engineering Consulting Organization of the City of Tehran, Tehran.

TETCO (Unknown date) "*My City: Tokyo*", (unknown translator) Technical & Engineering Consulting Organization of the City of Tehran, Tehran. (Unpublished)

TETCO [*et al.*] (Unknown date) "*tarhe olaviathaye tarahi va 'ejra'i šabakeye bozorgrahiye šahre Tehran*", (Priority Projects of Planning and Performing the Highway Networks of the City of Tehran) Technical & Engineering Consulting Organization of the City of Tehran, Tehran. (Unpublished.)

Tehran's Transportation & Traffic Comprehensive Studies Company (2001) "*motale'ate jame'e haml-o-naql va terafike tehran baraye kutah modat*", (Comprehensive Studies on Tehran's Transportation & Traffic Company for a Short Period) Tehran's Transportation & Traffic Comprehensive Studies Company, Tehran.

Turner, Tom (1997) "*City as Landscape: a post-Postmodern view of Planning and Design*", (trans. by Farshad Nouriyan) Urban Planning and Processing Company, Tehran.

United Nations Centre for Human Habitat (1990) "*Human Habitat and Natural Disasters*", Zadbum Consulting Engineers, Tehran. (Unpublished.)

United Nations World Summit, Habitat 2 (Unknown Date) "*The Growth of Urbanism in the Twenty-first Century... Can the Irregular Urbanism be Continued?*", Technical & Engineering Consulting Organization of the City of Tehran, Tehran. (Unpublished.)

Urban Planning and Processing Organization (1994) "*majmo'eye mosavabāt*", (Ratifications of the Coordination Council) Urban Planning and Processing Organization, Tehran.

Urban Planning and Processing Organization (1994) "*majmo'eye mosavabāt*", (Ratifications of the Deputy of the City Council) Urban Planning and Processing Organization, Tehran.

Urban Planning and Processing Organization (1995) "*majmo'eye mosavabāt*", (Collection of Ratified Laws (of the Council of Investigation and Planning) vol. 1) Urban Planning and Processing Organization, Tehran.

Urban Planning and Processing Organization (1995) "*majmo'eye mosavabāt*", (Collection of Ratified Laws (of the Council of Investigation and Planning) vol. 2) Urban Planning and Processing Organization, Tehran.

Urban Planning and Processing Organization (1995) "*majmo'eye mosavabāt*", (Collection of Ratifications (of the Supervision Council over the Development of the City of Tehran) Urban Planning and Processing Organization, Tehran.

Urban Planning and Processing Organization (2000) "*majmo'eye mosavabāt*", (Ratifications of the City Council, November 1968 – March 1977) Urban Planning and Processing Organization, Tehran.

Urban Planning and Processing Organization (2000) "*majmo'eye mosavabāt*", (Ratifications of the Article 8 Commission of the Supreme Council of Urbanism and Architecture, vol.1) Urban Planning and Processing Organization, Tehran.

Urban Planning and Processing Organization (2000) "*majmo'eye mosavabāt*", (Ratifications of the Article 8 Commission of the Supreme Council of Urbanism and Architecture vol.2) Urban Planning and Processing Organization, Tehran.

Urban Planning and Processing Organization (2000)"*majmo'eye mosavabāt*", (Ratifications of the Article 8 Commission of the Supreme Council of Urbanism and Architecture vol. 3) Urban Planning and Processing Organization, Tehran.

Urban Planning and Processing Organization (2000) "*majmo'eye mosavabāt*", (Ratifications of the Article 8 Commission of the Supreme Council of Urbanism and Architecture, vol. 4) Urban Planning and Processing Organization, Tehran.

Victor Groen Consulting Engineers (1968) "*The Comprehensive Plan of Tehran*", (6 Volumes) Budget and Planning Organization, Tehran.

Watson, Donald (1937) "tarahi-e eqlimi: osule nazari va ejrāie karborde enerji dar saxtemān " (Climatic Design: Energy–efficient Building, Principles and Practices), Tran. by V.Ghobadian and M.Faize Mahdavi. Tehran, University of Tehran press, 1372, 250 p. Serial no. 5023.

Weber, Max (1990) "*The City*", (trans. by Shiva Kaviyani) Enteshar Publications, Tehran.

Whitehouse, Ruth (1990) "*The First Cities*", (trans. by Mehdi Sahabi) Nashre Faza, Tehran.

Wiener, Norbert (1987) "*The Human Use of Human Being, Cybernetics and Society*", (trans. by Mehrdad Arjmand) Islamic Revolution Publications, Tehran.

Worsley, Peter (1994) "*Modern Sociology, vol.1*", (trans. by Hassan Pooyan) Chapakhsh Publications, Tehran.

Worsley, Peter (1994) "*Modern Sociology, vol.2*", (trans. by Hassan Pooyan) Chapakhsh Publications, Tehran.

Zadboom Consulting Engineers (1992) "*ta'sire bozorgrah-ha dar baft va hayate šahri*", (The Effect of Highways on the Urban Life and Context) (Unpublished), Tehran.

Zanjani, H. (1990) "*majmo'e mabahes va raveshaye šahrsazi ;jam'iyat*",(The Collection of Debates and Methods of Urbanism; Population) Centre for Urban Planning and Architecture Studies and Researches, Tehran.

Zargar, Akbar. *"darāmadi bar šenaxt-e memāri-e rustaei-e Iran"* (An Introduction to the Iranian Rural Architecture). Tehran, Shahid Beheshti University 1378.

Zavash, H. M. (1991) "*tehran dar gozargahe tarix*", (Tehran throughout History) Nashre Eshare, Tehran.

Zooeshtiyagh, S. (1992) "*zavabet va moqararate 'ejraei-ye tarhe jame'e jadide tehran (tarhe hefz va samandehi-ye tehran)*", (Performance Principles and Regulations of the Comprehensive Plan of Tehran (Preserving & Organizing Project of Tehran)) Urban Planning and Processing Company, Tehran.

(Unknown Writer) (2002) "*Strategic Planning in Metropolises*", (trans. Varaz Moradi Masihi) Urban Planning and Processing Company, Tehran.

(Unknown) (1973) "*montaxabi azqavanin va 'ā'innameha va moqararate šahrdari-ye paitaxt*", (Codes, Laws and Regulations of the Municipality of the Capital; a Selection) Municipality Publications, Tehran.

(Unknown) (Unknown date) "*tehran dar yek negah*", (Tehran at a Glance), A Photographic Collection (Unknown Place).

(Unknown) (Unknown date) *"mohitšenasi"*, (Ecology; Collection of Environmental Researches, No.15, Special edition on Tehran).

Technical Reports of the Navvab Project in the Document Centre of TETCO

Arkolog Consulting Engineers (1991) *"Construction designs of Navvab (first part) spacing Sina St. to Helal-e-Ahmar St.: Report of the first phase"*, Tehran.

Arkolog Consulting Engineers (1991) *"Construction designs of Navvab spacing Sina St. to Helal-e-Ahmar St.: Report of the first phase"*, Tehran.

Arkolog Consulting Engineers (1992) *"Construction designs of Navvab spacing Sina St. to Helal-e-Ahmar St.: Revised report of mechanical and electric installations"*, Tehran.

Arkolog Consulting Engineers (1992) *"Theory of urban design for the construction works of Chamran Highway: the Navvab St. spacing Sina St. to Helal-e-Ahmar St."*, Tehran.

Arkolog Consulting Engineers (1993) *"The reconstruction project of the surroundings of the Navvab Highway (section 2 west wing) spacing Imam Khomeini Ave. to Mortazavi St.: The completion report of the first phase"*, Tehran.

ATCEC (1990) *"Explanation report of the extension project of Chamran Highway"*, Vol.1, Tehran.

ATCEC (1990) *"The extension project of Chamran Highway: expansion of Navvab"*, Tehran.

ATCEC (1991) *"Explanation report of the extension project of Chamran Highway"*, Vol.2, Tehran.

ATCEC (1992) *"A summary of project report for the extension of Chamran Highway"*, Tehran.

ATCEC (1992) *"Designing the body construction works of the extension of Chamran Highway: report of subsection A of the first phase (revised)"*, Tehran.

ATCEC (1992) *"The project of construction works surrounding the Navvab Highway: An explanation report of the studies, subsection B of the first phase"*, Tehran.

ATCEC (1992) *"The project of construction works surrounding the Chamran Highway spacing Azarbaijan St. to Imam Khomeini Ave.: A summary of accomplished studies"*, Tehran.

ATCEC (1993) *"The project of construction works surrounding the Navvab Highway spacing Azarbaijan St. to Imam Khomeini Ave.: the final report of studies of subsection B of the first phase"*,Tehran.

ATCEC (1993) *"Explanation report of the Navvab Project spacing Touhid Sq to North Ghalemorghi and related interjections (revised)"*, Tehran.

ATCEC (1996) *"The Navvab Highway Project, spacing between Touhid Sq and Azarbaijan St."*, Tehran.

ATCEC (1998) *"The traffic scheme project of the Navvab Highway spacing Touhid Sq to Azarbaijan St.: A report of the first phase (revised)"*, Tehran.

ATCEC (Unknown date) *"Cost and the aggregate road-construction operation estimate of the Navvab Highway from the axis of Azarbaijan St. to the axis of Beryanak St."*, Tehran.

ATCEC (Unknown date) *"The Navvab Highway Project, spacing Touhid Sq to Azarbaijan St., A summary report of the accomplished studies (second phase)"*, Tehran.

ATCEC (Unknown date) "*A Summary of explanation report about the construction works on the verges of the Navvab Highway (first section) from the Azarbaijan intersection to Imam Khomeini Ave. with the length of 850 meters*",Tehran.

ATCEC (Unknown date) "*Opinions and results on an investigation report of sections 1,2,3 and 4 of extension project of Chamran Highway spacing Azarbaijan St. to Ghalemorghi*", Tehran.

ATCEC (Unknown date) "*The extension project of Chamran Highway (part 1) spacing Azarbaijan St. to Imam Khomeini Ave.: A summary report*", Tehran.

BNCEC (1991) "*The extension project of Chamran Highway: Housing and services*", Tehran.

BNCEC (Unknown date) "*The extension project of Chamran Highway (part 4) spacing Helal-e-Ahmar St. to the north Ghalemorghi: A summary report*", Tehran.

BNCEC (Unknown date) "*Construction works on the verges of the Navvab St. (fourth section) spacing Sina St. to Helal-e-Ahmar St.: Repost of the first phase*", Tehran.

BNCEC (Unknown date) "*Construction works on the verges of the Navvab St.: A summary report*", Tehran.

BACEC (1997) "*Special project of the Navvab axis: the final report*", Tehran.

BACEC (1997) "*Special project of the Navvab axis (specific projects): locating and prioritizing*", Tehran.

TETCO [*et al*], (1991) "*The usage alteration of Ghalemorghi Garrison*", Tehran. (Unpublished).

TETCO [*et al*], (1999) "*Possibility seeking study of Haghshenas Sq. architecture*", Tehran.

Khak-e-Sahra Company (1995) "*The earth study report of Navvab St. project spacing Touhid Sq to Azarbaijan St.*", Tehran.

Khak-e-Sahra Company (1996) "*Study report of soil mechanics and geotechnics of Navvab Highway spacing Azarbaijan St. Bridge to Touhid St.*", Tehran.

NPCEC (1996) "*The counter construction project of Navvab Ave. spacing Helal-e-Ahmar St. to Ghalemorghi*", Tehran.

NPCEC (Unknown date) "*A research report of the Navvab projects*", Tehran.

Polmir Consulting Engineers (1993) "*Report of the primary design of construction works on the verges of Chamran Highway spacing Sina St. to Helal-e-Ahmar St.*", Tehran.

Sabzine-Rah Consulting Engineers (2000) "*Study of safety traffic for the Navvab axis (second phase)*", Tehran.

TACEC (1991) "*The extension project of Chamran Highway (priority 2, part 1) spacing Imam Khomeini Ave. to Sina St.: Report of the first phase*", Tehran.

TACEC (1992) "*The extension project of Chamran Highway (part 2) spacing Imam Khomeini Ave. to Sina St.: The abstract of the first phase report*", Tehran.

TACEC (1992) "*The extension project of Chamran Highway (part 2) spacing Imam Khomeini Ave. to Sina St.: The completion report of part 1, phase 1*", Tehran.

TACEC (Unknown date) "*The extension project of Chamran Highway (part 2) spacing Imam Khomeini Ave. to Sina St.: A summary report*", Tehran.

The Renovation Organisation of the City of Tehran (1992) *"The renovation project of the Navvab roadside: the generalities of the project and possibility seeking report"*, Tehran.

(Unknown) (1995) "*Navab Highway Intersection Bridge over Imam Khomeini Ave.: a technical report",* Tehran.

(Unknown)(Unknown date) "*Generalities of the extension project for the Chamran Highway: construction works on the verges of the highway"*, Tehran.

Zista, Tarh-va-Abadi and Amood Consulting Engineers (1991) "*Viewpoints about extension project of Chamran Highway"*, Tehran.

APPENDIX I

GENERAL QUESTIONNARE

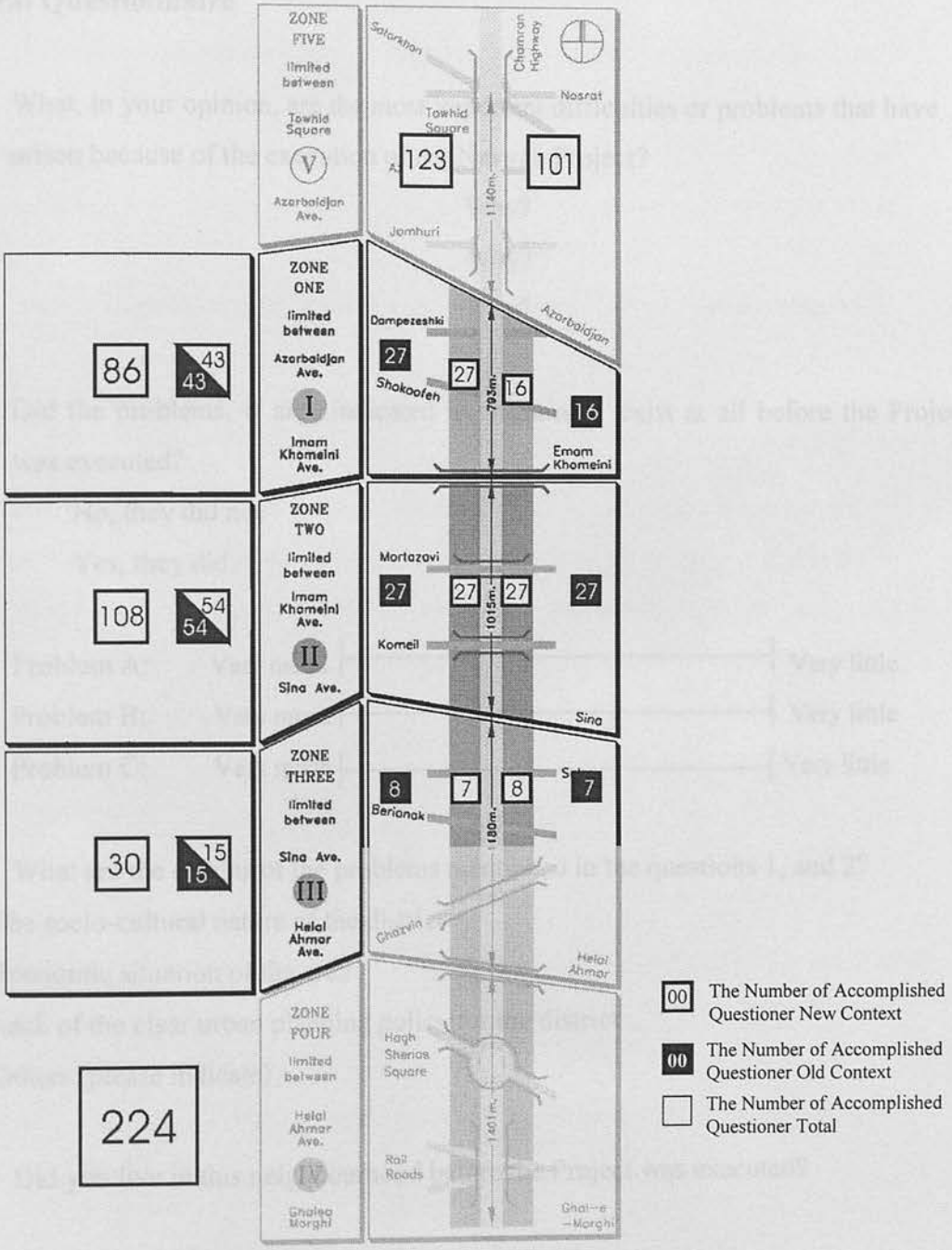


Figure 1 The Plan of Geographical Distribution of the General Questionnaire

General Questionnaire

1. What, in your opinion, are the most important difficulties or problems that have arisen because of the execution of the Navvab Project?

a) Why?

b) Why?

c) Why?

2. Did the problems, if any, indicated in Question 1 exist at all before the Project was executed?

☐ No, they did not

☐ Yes, they did

Problem A: Very much ——|——|——|—— Very little

Problem B: Very much ——|——|——|—— Very little

Problem C: Very much ——|——|——|—— Very little

3. What are the origins of the problems mentioned in the questions 1, and 2?

a) The socio-cultural nature of the district

b) Economic situation of the area

c) Lack of the clear urban planning policy for the district

d) Others (please indicate)

4. Did you live in this neighbourhood before the Project was executed?

☐ ——→ Yes please go to the question number 5.

☐ ——→ No please go to the question number 6.

5. Was Navvab a better district as it was before or do you prefer its new state?

☐ Before much better ├──────┼──────┼──────┤ quite worse

☐ Now much better ├──────┼──────┼──────┤ quite worse

6. Did you know anything about the Navvab Project before it was conducted?

☐ No

☐ Yes: if yes, how did you find out?

7. How do you think that a residential complex that lacks schools, mosques, supermarkets, shops etc should be built so that the residents can reach these facilities within 10 minutes by car or 30 minutes by walk? Would you prefer to live in such a complex or a neighbourhood that is relatively overcrowded but with many shops nearby?

☐ Complex why?

☐ Neighbourhood why?

8. In your opinion, which one of the followings is the best solution for the shortage of housing?

☐ The construction of the projects such as Navvab and offering advance sales. (why?.....)

☐ Giving housing mortgage to volunteers to buy their own living places based on their own choice. (Why?.....)

9. To what extent do you agree with this statement: "In the process of reconstructing and modernising the city, the old and historical structure of the city is not

important. If necessary, the destruction of the old structure in order to replace with the modern one is accepted".

Thoroughly agree|——————|——————|——————|completely disagree

Why?.....

10. What are the things you <u>like</u> about the Navvab Project?

Indicate three cases

1.
2.
3.

What are your two reasons for liking this project?

1.
2.

11. What are the things you <u>dislike</u> about the Navvab Project?

Indicate three cases

1.
2.
3.

What are your two reasons for disliking this project?

1.
2.

Questions for the residents of the Navvab Project

12. Since the time of your residence in this complex, what have been the problems you have faced? Which of these, if any, are particularly related to the place of residence? Why is that so?

I-.....

Why?.....

II-.....

Why?.....

III- .....

why?.....

13. Generally speaking, are you satisfied with this Project or not?

☐ Satisfied ⟶ Very much |—|—|—|—| Very little

☐ Dissatisfied ⟶ Very much |—|—|—|—| Very little

14. If a project, such as Navvab, were to be constructed, what would be your suggestions?

Classification of the Responses to the Public Questionnaire

Responses to Question 1

1. No problems were indicated
2. The highway problem (accesses, congestion, rowdiness, crowdedness)
3. Lack of public assistance (health services, schooling and education, public gardens, pedestrian bridges)
4. Lack of overall security (theft, drug addicts, homeless people)
5. **Difficulties inside the blocks (no title deed and segregation, improper construction, lack of standard, finishing, no separation between the residential and the commercial contexts).**

Responses to Question 2

1. No 2. Yes (if the response was yes, there was a spectrum between 1 (meaning very much) and 5 (meaning very little))

Responses to Question 3 (in the order of priority)

1. a: the cultural context of the district
2. b: the economic condition of the district
3. c: the lack of clear urban planning policy in the district
4. d: other cases.

Responses to Question 4

1. No 2. Yes

Responses to Question 5

1. Old (between 1 (meaning very much) and 5 (meaning very little))
2. New (between 1 (meaning very satisfied) and 5 (meaning very dissatisfied))
3. Do not know.

Responses to Question 6

1. No

2. Yes (1.people 2.the media 3. relatives 4. people in the neighbourhood)

Responses to Question 7

1. The complex	2. The neighbourhood
1.1. Being at ease	2.1. Being at ease
1.2. Security	2.2. Being in access
1.3. Access to facilities	2.3. Intimacy
1.4. Reasonably priced	2.4. Being economical

Responses to Question 8

1. The performance of the Navvab project:	2. Providing mortgage
1.1. The difficulties of depleted constructions	2.1. Better construction
1.2. Reasonably priced	2.2. Approved private property
1.3. Having standard, discipline and better facilities	2.3. Fewer difficulties
1.4. Supervision and planning	2.4. Specialised supervision over the construction

Responses to Question 9

A spectrum from 1 to 5 (quite agreed, agreed, rather agreed, disagreed, quite disagreed)

Reasons for quite agreed, agreed, rather agreed	**Reasons for disagreed, quite disagreed**
1. Lack of strength in old construction	1. Being at peace
2. The grace of modern construction	2. Good looks
3. being standard and having facilities	3. Worthiness of historical buildings

Responses to Question 10

0. Nothing (no point was mentioned)

1. Having better public assistance (facilities by the buildings, access to the metro and highway)

2. Having good looks, observing the engineering and urban planning principles
3. Mental and spiritual security
4. Being reasonably priced

Responses to Question 11

0. No problem was mentioned
1. Problems inside the buildings (lifts, sewer, construction codes, title deeds)
2. Problems outside the blocks (electricity, public parks, playgrounds, schools, pedestrian bridges)
3. Security, the strength of the beddings and structures
4. Cultural problems, cultural mingling

Responses to Question 12

0. No problem was mentioned
1. Socio-cultural – mental problems
2. Well-being facilities inside the blocks (lifts, sewer, electricity, gas)
3. Well-being facilities outside the blocks (schools, clinics)

Responses to Question 13

1. Satisfied

   From 1 (meaning very much) to 5 (meaning very little)
2. Dissatisfied

   From 1 (meaning very satisfied) to 5 (meaning very dissatisfied)

Responses to Question 14

1. The internal space of the buildings (technically, standard)
2. Well-being facilities (schools, clinics)
3. Security, psychic, legal
4. Reasonably priced.

Table No.0 Frequencies

Statistics

		District	Location	Ancientness
N	Valid	224	224	223
	Missing	0	0	1

Frequency tables

Table 0.1		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Imam Khomeini Ave. to Azarbaijan St.	86	38.4	38.4	38.4
	Sina St. to Imam Khomeini Ave.	108	48.2	48.2	86.6
	Helale Ahmar St. to Sina St.	30	13.4	13.4	100.0
	Total	224	100.0	100.0	

Table 0.2		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	West	123	54.9	54.9	54.9
	East	101	45.1	45.1	100.0
	Total	224	100.0	100.0	

Table 0.3		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Old	111	49.6	49.8	49.8
	New	112	50.0	50.2	100.0
	Total	223	99.6	100.0	
Missing	System	1	0.4		
Total		224	100.0		

Table No.1 Frequencies (Question 1)

Statistics

		The problems caused by Navvab Project	The problems caused by Navvab Project	The problems caused by Navvab Priject
N	Valid	224	149	54
	Missing	0	75	170

Frequency tables

Table 1.1		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No problems were indicated	30	13.4	13.4	13.4
	The highway problem	82	36.6	36.6	50.0
	Lack of public assistance	56	25.0	25.0	75.0
	Lack of overall security	30	13.4	13.4	88.4
	Difficulties inside the blocks	26	11.6	11.6	100.0
	Total	224	100.0	100.0	

Table 1.2		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No problems were indicated	28	12.5	18.8	18.8
	The highway problem	32	14.3	21.5	40.3
	Lack of public assistance	52	23.2	34.9	75.2
	Lack of overall security	18	8.0	12.1	87.2
	Difficulties inside the blocks	19	8.5	12.8	100.0
	Total	149	66.5	100.0	
Missing	System	75	33.5		
Total		224	100.0		

Table1.3		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No problems were indicated	28	12.5	51.9	51.9
	The highway problem	4	1.8	7.4	59.3
	Lack of public assistance	8	3.6	14.8	74.1
	Lack of overall security	9	4.0	16.7	90.7
	Difficulties inside the blocks	5	2.2	9.3	100.0
	Total	54	24.1	100.0	
Missing	System	170	75.9		
Total		224	100.0		

Table No.2 Frequencies (Question 2)

Statistics

		The role of Navvab project in generaing the problem	The level of the Navvab Project`s impact in generating the problem (A)	The level of the Navvab Project`s impact in generating the problem (B)	The level of the Navvab Project`s impact in generating the problem (C)
N	Valid	199	48	38	32
	Missing	25	178	186	192

Frequency tables

Table 2.1		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	152	67.9	76.4	76.4
	Yes	47	21.0	23.6	100.0
	Total	199	88.8	100.0	
Missing	System	25	11.2		
Total		224	100.0		

Table 2.2		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very much	12	5.4	26.1	26.1
	Very	2	0.9	4.3	30.4
	Moderate	8	3.6	17.4	47.8
	Little	6	2.7	13.0	60.9
	Very little	18	8.0	39.1	100.0
	Total	46	20.5	100.0	
Missing	System	178	79.5		
Total		224	100.0		

Table 2.3		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very much	11	4.9	28.9	28.9
	Very	3	1.3	7.9	36.8
	Moderate	4	1.8	10.5	47.4
	Little	4	1.8	10.5	57.9
	Very little	16	7.1	42.1	100.0
	Total	38	17.0	100.0	
Missing	System	186	83.0		
Total		224	100.0		

Table 2.4		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very much	6	2.7	18.8	18.8
	Very	5	2.2	15.6	34.4
	Moderate	2	0.9	6.3	40.6
	Little	4	1.8	12.5	53.1
	Very little	15	6.7	46.9	100.0
	Total	32	14.3	100.0	
Missing	System	192	85.7		
Total		224	100.0		

Table No.3 Frequencies (Question 3)

Statistics

		The first priority of the abovementioned problem	The secend priority of the abovementioned problem	The third priority of the abovementioned problem
N	Valid	194	46	24
	Missing	30	178	200

Frequency tables

Table 3.1		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	The cultural context of the district	32	14.3	16.5	16.5
	The economic condition of the district	7	3.1	3.6	20.1
	Lack of clear urban planning policy in the district	153	68.3	78.9	99.0
	Other cases	2	0.9	1.0	100.0
	Total	194	86.6	100.0	
Missing	System	30	13.4		
Total		224	100.0		

Table 3.2		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	The cultural context of the district	20	8.9	43.5	43.5
	The economic condition of the district	12	5.4	26.1	69.6
	Lack of clear urban planning policy in the district	12	5.4	26.1	95.7
	Other cases	2	0.9	4.3	100.0
	Total	46	20.5	100.0	
Missing	System	178	79.5		
Total		224	100.0		

able 3.3		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	The cultural context of the district	5	2.2	20.8	20.8
	The economic condition of the district	12	5.4	50.0	70.8
	Lack of clear urban planning policy in the district	6	2.7	25.0	95.8
	Other cases	1	0.4	4.2	100.0
	Total	24	10.7	100.0	
Missing	System	200	89.3		
Total		224	100.0		

Table No.4 Frequencies (Question 4)

Statistics

		The record of residence in the area
N	Valid	223
	Missing	1

Frequency table

Table 4.1		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	112	50.0	50.2	50.2
	Yes	111	49.6	49.8	100.0
	Total	223	99.6	100.0	
Missing	System	1	0.4		
Total		224	100.0		

Table No.5 Frequencies (Question 5)

Statistics

		The comparison of the apearance of the neighbourhood	The junior resident's idea about the prior look of the neighbourhood	The junior resident's idea about the prior look of the neighbourhood
N	Valid	140	39	98
	Missing	84	185	126

Frequency tables

Table 5.1		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Do not know	2	0.9	1.4	1.4
	Old	40	17.9	28.6	30.0
	Now	98	43.8	70.0	100.0
	Total	140	62.5	100.0	
Missing	System	84	37.5		
Total		224	100.0		

Table 5.2		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Much better	18	8.0	46.2	46.2
	Better	18	8.0	46.2	92.3
	Moderate	3	1.3	77.0	100.0
	Total	39	17.4	100.0	
Missing	System	185	82.6		
Total		224	100.0		

Table 5.3		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Much better	49	21.9	50.0	50.0
	Better	38	17.0	38.8	88.8
	Moderate	9	4.0	9.2	98.0
	Worse	1	0.4	1.0	99.0
	Much worse	1	0.4	1.0	100.0
	Total	98	43.8	100.0	
Missing	System	126	56.3		
Total		224	100.0		

Table No.6 Frequencies (Question 6)

Statistics

		The awareness of the residents about the performance of the project	The way of becoming informed
N	Valid	224	145
	Missing	0	79

Frequency table

Table 6.1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	80	35.7	35.7	35.7
	Yes	144	64.3	64.3	100.0
	Total	224	100.0	100.0	

Table 6.2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	People	49	21.9	33.8	33.8
	The media	46	20.5	31.7	65.5
	Relatives	26	11.6	17.9	83.4
	People in the neighbourhood	24	10.7	16.6	100.0
	Total	145	64.7	100.0	
Missing	System	79	35.3		
Total		224	100.0		

Table No.7 Frequencies (Question 7)

Statistics

		The level of interest of the resident of their residence	The reason of interest in residing in the complex	The reason of interest in residing in the neighbourhood
N	Valid	223	82	133
	Missing	1	142	91

Frequency tables

Table 7.1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No diffrence	1	0.4	0.4	0.4
	The complex	85	37.9	38.1	38.6
	The neighbourhood	137	61.2	61.4	100.0
	Total	223	99.6	100.0	
Missing	System	1	0.4		
Total		224	100.0		

Table 7.2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Being at ease	46	20.5	56.1	56.1
	Security	3	1.3	3.7	59.8
	Access to facilities	25	11.2	30.5	90.2
	Reasonably prices	8	3.6	9.8	100.0
	Total	82	36.6	100.0	
Missing	System	142	63.4		
Total		224	100.0		

Table 7.3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Being at ease	60	26.8	45.1	45.1
	Being at access	38	17.0	28.6	73.7
	Intimacy	31	13.8	23.3	97.0
	Being economical	4	1.8	3.0	100.0
	Total	133	59.4	100.0	
Missing	System	91	40.6		
Total		224	100.0		

Table No.8 Frequencies (Question 8)

Statistics

		The proposed solution for overcoming the housing problem	Proposed reason for the performance of projects identical to the Navvab and the advance sales	Reasons for providing mortgages
N	Valid	221	115	94
	Missing	3	109	130

Frequency tables

Table 8.1		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	The Navvab Project and the advance sales	122	54.5	55.2	55.2
	Mortgage providing	98	43.8	44.3	99.5
	Both	1	0.4	0.5	100.0
	Total	221	98.7	100.0	
Missing	System	3	1.3		
Total		224	100.0		

Table 8.2		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	The difficulties of depleted constructions	15	6.7	13.0	13.0
	Reasonably priced	40	17.9	34.8	47.8
	Having standard discipline and better facilities	29	12.9	25.2	73.0
	Supervision and planning	28	12.5	24.3	97.4
	More household can live there	3	1.3	2.6	100.0
	Total	115	51.3	100.0	
Missing	System	109	48.7		
Total		224	100.0		

Table 8.3		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Other cases	1	0.4	1.1	1.1
	Better contruction	27	12.1	28.7	29.8
	Approved private property	8	3.6	8.5	38.3
	Less difficulties	23	10.3	24.5	62.8
	Specialised supervision over the construction	35	15.6	37.2	100.0
	Total	94	42.0	100.0	
Missing	System	130	58.0		
Total		224	100.0		

Table No.9 Frequencies (Question 9)

Statistics

		The level agreement with the distruction of the old context in the expense of renovation	The reason of agreeing with the replacement of old building with the modern ones	The reason of disagreeing with the replacement of old building with the modern ones
N	Valid	223	135	68
	Missing	1	89	156

Frequency tables

Table 9.1		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Indifferent	3	1.3	1.3	1.3
	Quite agreed	74	33.0	33.2	34.5
	Agreed	44	19.6	19.7	54.3
	Rather agreed	29	12.9	13.0	67.3
	Disagreed	46	20.5	20.6	87.9
	Quite disagreed	27	12.1	12.1	100.0
	Total	223	99.6	100.0	
Missing	System	1	0.4		
Total		224	100.0		

Table 9.2		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Lack of strength in old construction	16	7.1	11.9	11.9
	The grace of modern construction	53	23.7	39.3	51.1
	being standard and having facilities	37	16.5	27.4	78.5
	worthiness of historical building	29	12.9	21.5	100.0
	Total	135	60.3	100.0	
Missing	System	89	39.7		
Total		224	100.0		

Table 9.3		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Being peace	23	10.3	33.8	33.8
	Good looks	11	4.9	16.2	50.0
	Worthiness of historical buildings	34	15.2	50.0	100.0
	Total	68	30.4	100.0	
Missing	System	156	69.6		
Total		224	100.0		

Table No.10 Frequencies (Question 10)

Statistics

		The agreeing items with the Navvab Project	The agreeing items with the Navvab Project	The agreeing items with the Navvab Project
N	Valid	221	98	51
	Missing	3	126	173

Frequency tables

Table 10.1		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Nothing(No point was mentioned)	47	21.0	21.3	21.3
	Having better public assistance	101	45.1	45.7	67.0
	Having good looks, Observing the engineering and urban plann	46	20.5	20.8	87.8
	Mental and spritual security	14	6.3	6.3	94.1
	Being reasonably priced	13	5.8	5.9	100.0
	Total	221	98.7	100.0	
Missing	System	3	1.3		
Total		224	100.0		

Table 10.2		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Nothing(No point was mentioned)	47	21.0	48.0	48.0
	Having better public assistance	17	7.6	17.3	65.3
	Having good looks, Observing the engineering and urban plann	27	12.1	27.6	92.9
	Mental and spritual security	2	0.9	2.0	94.9
	Being reasonably priced	5	2.2	5.1	100.0
	Total	98	43.8	100.0	
Missing	System	126	56.3		
Total		224	100.0		

ble 10.3		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Nothing(No point was mentioned)	47	21.0	92.2	92.2
	Having better public assistance	1	0.4	2.0	94.1
	Having good looks, Observing the engineering and urban plann	1	0.4	2.0	96.1
	Mental and spritual security	1	0.4	2.0	98.0
	Being reasonably priced	1	0.4	2.0	100.0
	Total	51	22.8	100.0	
Missing	System	173	77.2		
Total		224	100.0		

Table No.11 Frequencies (Question 11)

Statistics

		The disagreeing items with the Navvab Project	The disagreeing items with the Navvab Project	The disagreeing items with the Navvab Project
N	Valid	218	82	30
	Missing	6	142	194

Frequency tables

Table 11.1		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No problem was mentioned	17	7.6	7.8	7.8
	Problems inside the buildings	45	20.1	20.6	28.4
	Problems outside the blocks	121	54.0	55.5	83.9
	Security,the strength of the bedding and structures	25	11.2	11.5	95.4
	Cultural problems,cultural mingling	10	4.5	4.6	100.0
	Total	218	97.3	100.0	
Missing	System	6	2.7		
Total		224	100.0		

Table 11.2		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No problem was mentioned	16	7.1	19.5	19.5
	Problems inside the buildings	18	8.0	22.0	41.5
	Problems outside the blocks	24	10.7	29.3	70.7
	Security,the strength of the bedding and structures	16	7.1	19.5	90.2
	Cultural problems,cultural mingling	8	3.6	9.8	100.0
	Total	82	36.6	100.0	
Missing	System	142	63.4		
Total		224	100.0		

Table 11.3		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No problem was mentioned	16	7.1	53.6	53.3
	Problems inside the buildings	2	0.9	6.7	60.0
	Problems outside the blocks	3	1.3	10.0	70.0
	Security,the strength of the bedding and structures	8	3.6	26.7	96.7
	Cultural problems,cultural mingling	1	0.4	3.3	100.0
	Total	30	13.4	100.0	
Missing	System	194	86.6		
Total		224	100.0		

Table No.12 Frequencies (Question 12)

Statistics

		The problems coused by residing in the complex	The problems caused by residing in the Navvab complex	The problems caused by residing in the Navvab complex
N	Valid	120	56	30
	Missing	104	168	194

Frequency tables

Table 12.1		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No problem was mentioned	23	10.3	19.2	19.2
	Social,cultural,mental problems	19	8.5	15.8	35.0
	Well-being facilities inside the blocks	67	29.9	55.8	90.8
	Well-being facilities outside the blocks	11	4.9	9.2	100.0
	Total	120	53.6	100.0	
Missing	System	104	46.4		
Total		224	100.0		

Table 12.2		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No problem was mentioned	23	10.3	41.1	41.1
	Social,cultural,mental problems	6	2.7	10.7	51.8
	Well-being facilities inside the blocks	15	6.7	26.8	78.6
	Well-being facilities outside the blocks	12	5.4	21.4	100.0
	Total	56	25.0	100.0	
Missing	System	168	75.0		
Total		224	100.0		

Table 12.3		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No problem was mentioned	23	10.3	76.7	76.7
	Social,cultural,mental problems	1	0.4	3.3	80.0
	Well-being facilities outside the blocks	6	2.7	20.0	100.0
	Total	30	13.4	100.0	
Missing	System	194	86.6		
Total		224	100.0		

Table No.13 Frequencies (Question 13)

Statistics

		The satisfaction level of the Navvab Project	The satisfaction level of the Navvab Project	The dissatisfaction level of the Navvab Project
N	Valid	120	90	24
	Missing	104	134	200

Frequency tables

Table 13.1		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Satisfied	94	42.0	78.3	78.3
	Dissatisfied	26	11.6	21.7	100.0
	Total	120	53.6	100.0	
Missing	System	104	46.4		
Total		224	100.0		

Table 13.2		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Meaning very much	12	5.4	13.3	13.3
	Very	28	12.5	31.1	44.4
	Moderate	34	15.2	37.8	82.2
	Little	14	6.3	15.6	97.8
	Meaning very little	2	0.9	2.2	100.0
	Total	90	40.2	100.0	
Missing	System	134	59.8		
Total		224	100.0		

Table 13.3		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Meaning very much	11	4.9	45.8	45.8
	Very	4	1.8	16.7	62.5
	Moderate	3	1.3	12.5	75.0
	Little	2	0.9	8.3	83.3
	Meaning very little	4	1.8	16.7	100.0
	Total	24	10.7	100.0	
Missing	System	200	89.3		
Total		224	100.0		

Table No.14 Frequencies (Question 14)

Statistics

		Proposed suggestions for construction of the projects identical to the Navvab	Proposed suggestions for construction of the projects identical to the Navvab	Proposed suggestions for construction of the projects identical to the Navvab
N	Valid	112	58	7
	Missing	112	166	217

Frequency tables

Table 14.1		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No suggestion	12	5.4	10.7	10.7
	The internal space of the buildings(technicaly, standard)	59	26.3	52.7	63.4
	Well-being facilities	37	16.5	33.0	96.4
	Security, Psychic,legal	3	1.3	2.7	99.1
	Reasonaly priced	1	0.4	0.9	100.0
	Total	112	50.0	100.0	
Missing	System	112	50.0		
Total		224	100.0		

Table 14.2		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	The internal space of the buildings(technicaly, standard)	13	5.8	22.4	22.4
	Well-being facilities	36	16.1	62.1	84.5
	Security, Psychic,legal	8	3.6	13.8	98.3
	Reasonaly priced	1	0.4	1.7	100.0
	Total	58	25.9	100.0	
Missing	System	166	74.1		
Total		224	100.0		

Table 14.3		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Well-being facilities	1	0.4	14.3	14.3
	Security, Psychic,legal	6	2.7	85.7	100.0
	Total	7	3.1	100.0	
Missing	System	217	96.9		
Total		224	100.0		

APPENDIX II

SPECIALISED QUESTIONNARE

Specialised Questionnaire

1-1- Which of the following definitions of a city do you find the most appropriate?

a) City is a general concept and emerges in response to the global identical needs. With the development of science and technology, a city can be established in varying natural and climatic conditions. Thus, a city is a general and universal defined concept.

b) City has the characteristics as given in a) above, except that it is under the influence of the natural surroundings and the prevailing geographic and ecological conditions. Otherwise, the concept of city is universal and cities are all similar.

c) City is a general concept and emerges in response to the needs of human beings but under the influence of the climatic, social, cultural and political region in which it emerges. Its growth and development follow globally identical scientific and technological trends and methods.

d) The emergence, growth and development of a city are entirely shaped by regional conditions based on natural, environmental, social, cultural and scientific factors and the local interactions and technologies.

- **What is the reason for selecting this definition?**

1-2- The constituents of an urban setting such as roads, squares, markets, shopping centres, airports, train and bus terminals etc

a) Are general and universal and can exist independently of the city.

b) Follow the universally typical models, depending on the climatic and natural conditions of the region in which it is situated.

c) Are of an internationally standardised 'type', depending on climatic, social, cultural, political conditions.

d) Will be different and so the city will be different from one part of the world to another, depending on climatic, social, cultural, political conditions.

- **What have been the implications of this definition in your own work?**

2-1- **Some people consider provision of housing for city dwellers as the main function of a city. Others consider it as a collection of various functions such as living, working, cultural and political activities. Which of the following do you find the most appropriate?**

a) A city emerges and develops based on citizens' mode of living and the models of the housing complexes.

b) The model of a city is initially based on the living trends and models of the citizens; however, it is also determined by other activities and functions that are carried out in its context.

c) A city may be the result of certain activities and functions. Other functions, including housing, may follow the main function.

d) A city is the outcome of a collection of interactions and functions, which make up the concept of urbanism, as well as the interactions between the functions.

- **How does your selected definition describe the Navvab project?**

2-2- Which of the following would be the best solution to the issue of meeting the needs for housing?

a) High-rise buildings (high density).

b) Medium rise buildings (medium density)

c) Low-rise buildings (low density).

d) A combination of all three.

- **Why?**

2-3- Due to various reasons, a city may face a number of crises in the course of its growth and development such as shortage in housing, inadequate services, security deficiency etc. In this regard, several propositions have been put forward. Which of the following do you consider the main cause of such crises?

a) Urban crises and problems are the results of housing crises and qualitative and quantitative shortcomings in housing.

b) Urban crises and problems are the results of housing crises and qualitative and quantitative shortcomings in housing and the related functions and services.

c) Urban crises and problems are the results of crises and deficiencies in the behavioural and functional patterns and land uses.

d) Urban crises and problems are the results of a lack of proper organisation, relations and interactions among the city functions and behaviours in the context of a city.

- **Why?**

3-1- Which sector, in your opinion, should be involved in urban affairs?

a) Governmental

b) Public

c) Private

d) A combination the above (please indicate the elements of the combination)

- **Why?**

3-2- Some people consider urban planning to be the work of experts, notable architects and urban planners. Others maintain that it must

be done through the co-operation of experts and the public whose participation must be encouraged through appropriate mechanisms. In this regard, which of the following do you consider the most appropriate?

a) Urban planning must be left to urban planners and architects.
b) Urban planning must be left to urban planners and architects, as well as other experts as deemed necessary by the former.
c) Urban planning must come about through the co-operation of various experts.
d) Urban planning must come about through the co-operation of experts and the public whose participation must be encouraged and stimulated appropriately.

- **How would you justify your option?**

4-1- Which of the following do you consider the most appropriate in the classification of land uses in a city?

a) Land uses can be put under four general classes: housing, work, transportation and recreation.
b) In addition to the abovementioned categories, there are other functions and activities such as political, cultural etc but they are not among the main activities.
c) Other functions and activities such as political, cultural etc, which are, should also be included in the main categories.
d) In addition to the land uses given in 'c' above, a city must meet other needs of the citizens to develop a sense of belonging in them towards the homes, neighbourhoods, environment of their own and the ones of the others.

- **What are your reasons for this priority?**

4-2- **Which of the following solutions would you choose with respect to land uses?**

a) Appropriate distances between the land uses must segregate them.
b) Although land uses must be segregated, their adjacency should affect the functions of other land uses.
c) Land uses must be segregated according to observance of the rights for each section; the remaining spaces between them should be left to public uses (related to temporal-spatial distribution of activities).
d) Land uses can be intermixed at various levels with common spaces in between them.

- **Why?**

5-1- **Considering the high rate of technological and scientific growth and development, which of the following views do you find most valid?**

a) With the emphasis on standardising urban functions and behaviours, and consequently, the urban spaces, optimal and international designs and plans can be carried out.
b) In addition to the theory indicated in a), the climatic and natural conditions, and the level of technological transference and absorbability should be considered in categorising international designs and programmes.
c) In addition to climatic and natural conditions and cultural economic and political indices are also influential in accepting and adopting international models, patterns and designs. Therefore, these models and patterns should be standardised.
d) Science and technology should be employed universally in the interactions between ecological, social, cultural, economic,

political...factors towards the development of the pattern and model of each city, district or even neighbourhood.

- **What is the reason for this selection?**

5-2- Which solution would you choose to deal with the old and degenerating parts of a city?

a) We must not allow the history and the past to stop the progress and development of urban plans. The only thing to be considered is the fundamental installations and facilities for performing new projects.

b) The existence of the old pattern must be considered and the possibility of its preservation next to newer patterns must be given careful thought and implemented whenever possible.

c) In addition to the above (b), plans must be such that the principles of urban planning and concordance among adjacent patterns are simultaneously implemented.

d) The identity of the old neighbourhoods must be allowed for and cultural heritage must be respected and harmonised with modern city life.

- **Why?**

6-1- **Which of the following definitions would you apply to the Navvab Project?**

a) The Navvab Project is a collection of housing complexes being built on the two verges of the Navvab Highway.

b) The Navvab Project is a city highway on the verges of which housing projects are being carried out on a large scale.

c) The Navvab Project is a collection of construction undertakings including a highway, numerous housing and commercial complexes that are being implemented as a city renovation and development programme.

d) The Navvab Project is an involvement in the city's old context with the aim of completing a city highway and the reconstruction of the older parts of the city.

- **Why?**

6-2- **There are some who do not consider the Navvab Project to be successful in achieving its objectives such as completion of a city highway, proper housing for the people, and renovation of the old context. Which of the following comments do you find to be the most appropriate as an explanation for this failure?**

a) The government's failure to provide adequate financial and non-financial support to the project, as well as crises in the management circles were the real causes of the failure.

b) The causes were the government's failure to continue to provide adequate support at the time of the crisis in the city management circles, and disruptions in the managements of the companies and institutions involved in the project were the main causes of the failure.

c) No opportunity was offered to the private sector to make significant contributions in the investment and management of the project. This was the true reason for its failure.

d) Non-participation of the private sector and the people in general led to the failure.

- **Why?**

*6-3-***There are others who do not consider the Navvab Project to be a success in achieving its objectives such as completion of a city highway, proper housing for the people, renovation of the old context. Nor do they find the outcome to be in line with proposed plans and the initial schedules. From**

your point of view, how are the causes of this non-fulfilment to be interpreted?

a) Apart from the qualified specialists, others imposed certain influences on the process of urban planning and designing.
b) In the process of urban planning and designing, no opportunity was given to the architects and urban planners to enjoy the collaboration of other experts and specialists.
c) In the process of urban planning and designing, there was no possibility of collaboration between various sectors and fields, hence most of the plans were carried out discretely.
d) There was no effective organisation and co-operation among experts in various fields (architects, urban planners and economists, traffic experts) to provide an inter-disciplinary environment for the initial studies and planning. Moreover, the lack of this organisation led to incongruity in the system of decision-making and implementation.

- **Why do you think this option has taken place?**

7-1- **According to your field of knowledge, experience and interest in urbanism and urban management and other related fields of urban studies and urban planning, if the Navvab Project were to be started all over again, what would be your initial propositions?**

7-2- **There are some reproves and comments on the Navvab Project. In accordance with your field of experience and study, how would you classify these comments?**

The minor categories in the interview with experts and managers (open questions):

1. There is an organic approach to the city, and it is assumed as an organism, a complex multilayered system.
2. Urbanisation and civil life are considered as diverse interaction domains for behaviours and activities of the citizens and are nothing more than the physical and mechanical combination, and the totality of these deeds.
3. Urbanisation and civil life are considered as universal phenomena related to the common human culture and civilisation, and despite ostensible diversities, they are in themselves similar.
4. City is ultimately formed in accordance with residential housing patterns and consequently, with rudimentary activities.
5. Models, patterns, standards and other urban elements are the outcomes of the interactions of different disciplines on one side and the interactions of different life aspects on the other. They are related to their locality by nature.
6. Models, patterns, standards and other urban elements are specific scientific phenomena that make allowances for the adopted models taking into consideration the environmental issues, economic situation and other local factors.
7. Considering the value of the ground, fundamental installations and reasonable economic productions, the most suitable housing pattern is flat residencies (the common and international model), and most preferably, if at all possible, in high blocks.
8. Taking the specifications, the local and the cultural situations, the elements that necessitate the diversity of urbanisation and urban life, into consideration there will be a variety of housing patterns and models.
9. Urban planning attempts and involvements in the city (in micro or macro extent) must be in a process and in connection with the whole system.

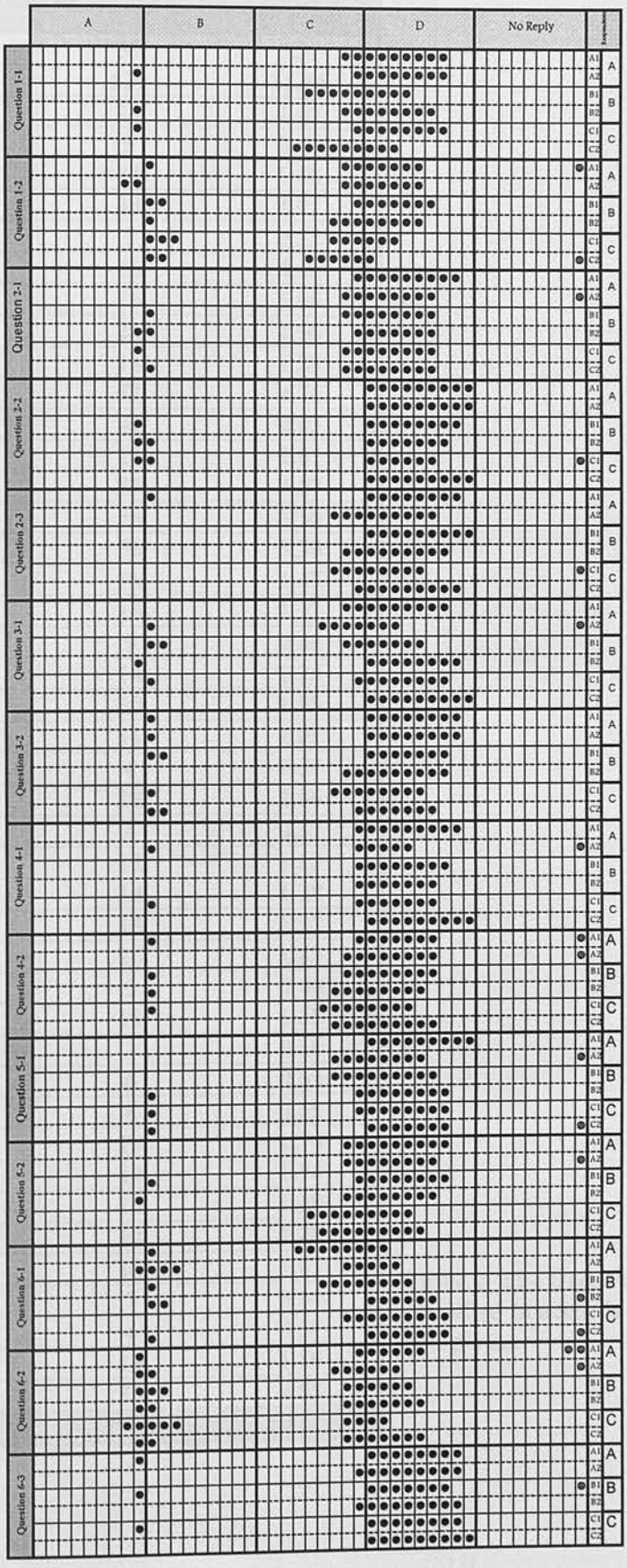
10. Urban planning attempts and involvements in the city (in micro or macro extent) is a project, which should be pursued through goal assignment, investigation, planning, suitable pattern and model selecting.
11. The main forces for urban planning and involvements in a city are imposed by the state and this is the duty of the state to pursue these matters.
12. The main forces for urban planning and involvements in a city, in any forms, are to be imposed by the people. This is to be performed in a process. The continuity of this is to be fulfilled through the participation of the private sector and the collaboration of this sector with the state. Hence, the participation and the interaction of different sectors would lead to proper urbanising.
13. Urban planning and designing is a process that involves the interaction of different disciplines (architecture, urban planning, environmental studies) and the social way of life.
14. Urban planning and designing is a process that is solely the duty of the specialists, particularly the architectures and urban planners, and should be carried out by them.
15. The identity of the city and urbanisation is based on the past and the background, the present and the current civil life, and the future designs and plans that are to be found in the public consciousness and the common sense of the public. Initially these images cannot be ignored.
16. Public participation and the contribution of the citizens in the process of urban planning and involvement in the city, just as other current urban affairs, is a sine qua non.
17. Combining and amalgamating usages in every urban section and context, and not stabilising urban spaces to specific usages would lead to diversities in the way of life and the options for citizens.
18. Differentiating and separating the usages is necessary to avoid interferences and disturbances.

19. The urban development plans have to be futuristic, meanwhile paying attention to the old context.
20. The old context, apart from the historical monuments, is not worth to be preserved particularly when they are considered as obstacles towards development and reconstruction.
21. The Navvab Project has been defined according to decision-making, planning and Implementation in which it has the support of government (municipality).
22. In the Navvab Project, goals, confirmation, visions, planning and Implementation have been performed in an up-to-down direction by government sections (including the municipality which is in direct association with the government) that have no believes ion group public decision-making.
23. Main reason that prevented the development of the Navvab Project was that the government did not support it financially and to certain extent politically.
24. In the Navvab Project, there have been no accurate, full coverage initial study and investigation about the bedrock of the project, the locality of the project, and the peripheral problems in the Implementation of project. No scientific method was employed in the planning.
25. Lack of participation between public and private sectors, in other words the absence of social participation and cooperation, obviously caused the non-fulfilment of the Navvab Project.
26. Deficit of participations as well as low experiences in nature of coordination among government organisations and officials such as (the Ministry of Housing, the municipality, service-providing agencies, the police force) had caused the Navvab Project not to meet it ends.
27. Inexperienced, uneducated persons in charge of the project led to a halt in the Navvab Project and because of that, the investments were mostly wasted.

28. Due to the lack of a systemic approach in the involvement in the city and acentric, one-dimensional and inappropriate decision-makings caused the non-fulfilment of the Navvab Project.
29. Being considered as a means in political confrontations and politically confronted by the opposing parties diverted the project from its objectives and led to the non-success of the project.
30. Emphasising on the true participation of the private and public sectors, the civil institutions, trade unions and professional organisations in different stages of involvement in the city (of which the Navvab Project is an example).
31. It is necessary that the upstream plans (comprehensive, detailed) would become the basis of future works.
32. For such an involvement in the city (the one like the Navvab Project), it is suggested that systematic studies are carried out for a better understanding of the city (from economic, social, cultural, physical aspects) and seeking a required residential patterns.
33. An organic relation between the old and the new contexts, and the ways of life within both, are to be set and harmonised as the prerequisite of such projects.
34. There should be attempts in the Navvab Project to reduce the construction density of the residential, commercial and administrative units and increase the public spaces.
35. For an urban project (like the one in Navvab) division and timing of labour in accordance with time, space and volume of the work is quite essential, so that every amount can be absorbed and well performed by the private and public sections.
36. Initiating a suitable environment for exchanging ideas and consultation of different fields of work and urban specialities are considered as primarily stages of performing such projects.

37. One the weak points of this project have been the delay in the performing operations, incomplete works, improper use of the lands, lack of attention to the public life, demands and complains.
38. The problems caused by the highway traffic inside the dense context of the residential areas (such as noise, pedestrian and car access, lack of attention to urban hierarchies) are among flaws of this project that cannot be easily prevailed over.
39. Deficiency of service-providing and public spaces necessary for the social life (mosques, schools, banks) are more obvious in comparison with the old context.
40. Intervention in the old context and the social, economic and cultural lives of the residents on either sides of the highway are to be considered among the drawbacks of this project.
41. Amongst the present difficulties cause by this project are social, cultural and economic disorders and growth of insecurity in the locations were the construction works have been left abandoned.
42. The public mistrust towards the authorities and officials has been the natural consequences of non-fulfilment of promises.
43. Lack of proper planning, accurate, deep and wide-coverage studies on the probable consequences of the Navvab Project, has made the decision-making about this project a difficult task.
44. No responses – irrelevant responses.

Table 1. The Overall Diagram of the Responses to Close Questions



Categories	Frequency	Percent
1	58	5.31
2	129	11.81
3	27	2.47
4	5	0.47
5	73	6.68
6	33	3.02
7	9	0.82
8	48	4.40
9	76	6.96
10	28	2.56
11	14	1.28
12	52	4.76
13	44	4.03
14	11	1.01
15	39	3.57
16	36	3.30
17	36	3.30
18	16	1.47
19	15	1.37
20	5	0.46
21	14	1.28
22	20	1.83
23	11	1.01
24	4	0.37
25	28	2.56
26	4	0.37
27	12	1.10
28	14	1.28
29	15	1.37
30	20	1.83
31	5	0.46
32	18	1.65
33	2	0.18
34	6	0.55
35	6	0.55
36	19	1.74
37	19	1.74
38	14	1.28
39	14	1.28
40	16	1.47
41	7	0.64
42	4	0.37
43	13	1.19
44	53	4.85
Total	*1092*	*100.00*

Table 2. The frequency table responses, classified in accordance with minor categories.

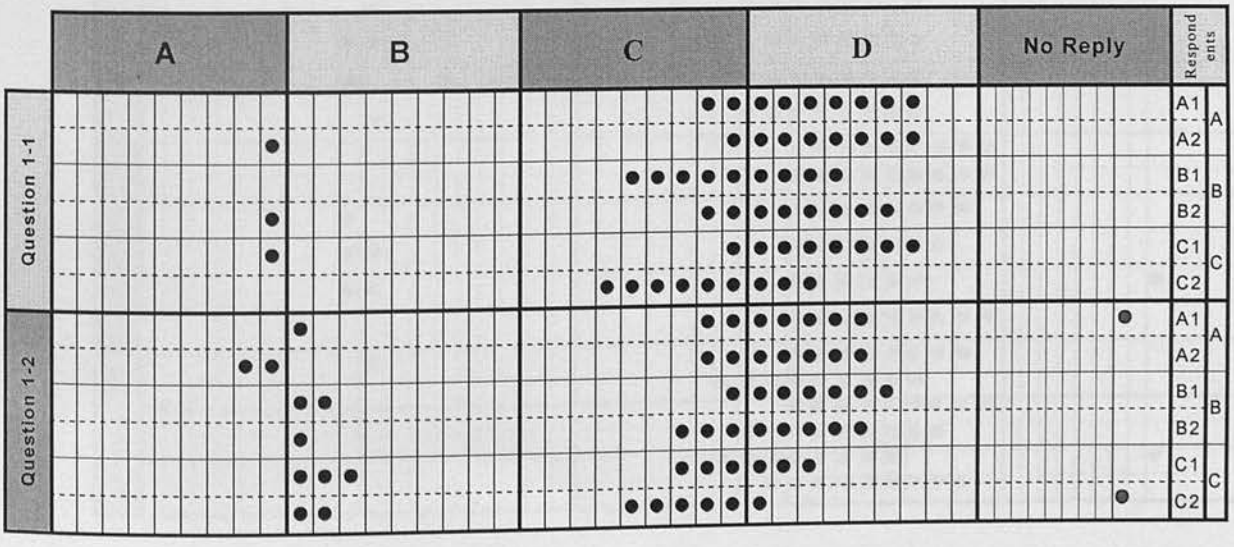
City and Urbanisation	Frequency	Percent
Category 1	58	27.10%
Category 2	129	60.28%
Category 3	27	12.62%
Total	*214*	*100.00%*

Tables No.3.1

Minor Categories Number	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
1- There is an organic approach to the city, and it is assumed as an organism, a complex multilayered system.	Solution Providers	Frequency	7	5	12
		Percent	12.07	8.62	20.69
	Decision-makers	Frequency	9	8	17
		Percent	15.52	13.79	29.31
	Implementers	Frequency	11	18	29
		Percent	18.97	31.03	50.00
	Total	Frequency	27	31	58
		Percent	46.55	53.45	100.00

Minor Categories Number	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
2-Urbanization and the civil life is considered as diverse interactional domains for behaviours and activities of the citizens and is nothing more than the physical and mechanical combination, and the totality of these deeds.	Solution Providers	Frequency	27	24	51
		Percent	20.93	18.60	39.53
	Decision-makers	Frequency	25	21	46
		Percent	19.38	16.28	35.66
	Implementers	Frequency	17	15	32
		Percent	13.18	11.63	24.81
	Total	Frequency	*69*	*60*	*129*
		Percent	*53.49*	*46.51*	*100.00*

Minor Categories Number	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
3- Urbanization and the civil life is considered as a universal phenomena related to the common human culture and civilization, and despite ostensible diversities they are in themselves similar.	Solution Providers	Frequency	2	8	10
		Percent	7.41	29.63	37.04
	Decision-makers	Frequency	5	4	9
		Percent	18.52	14.81	33.33
	Implementers	Frequency	6	2	8
		Percent	22.22	7.41	29.63
	Total	Frequency	*13*	*14*	*27*
		Percent	*48.15*	*51.85*	*100.00*



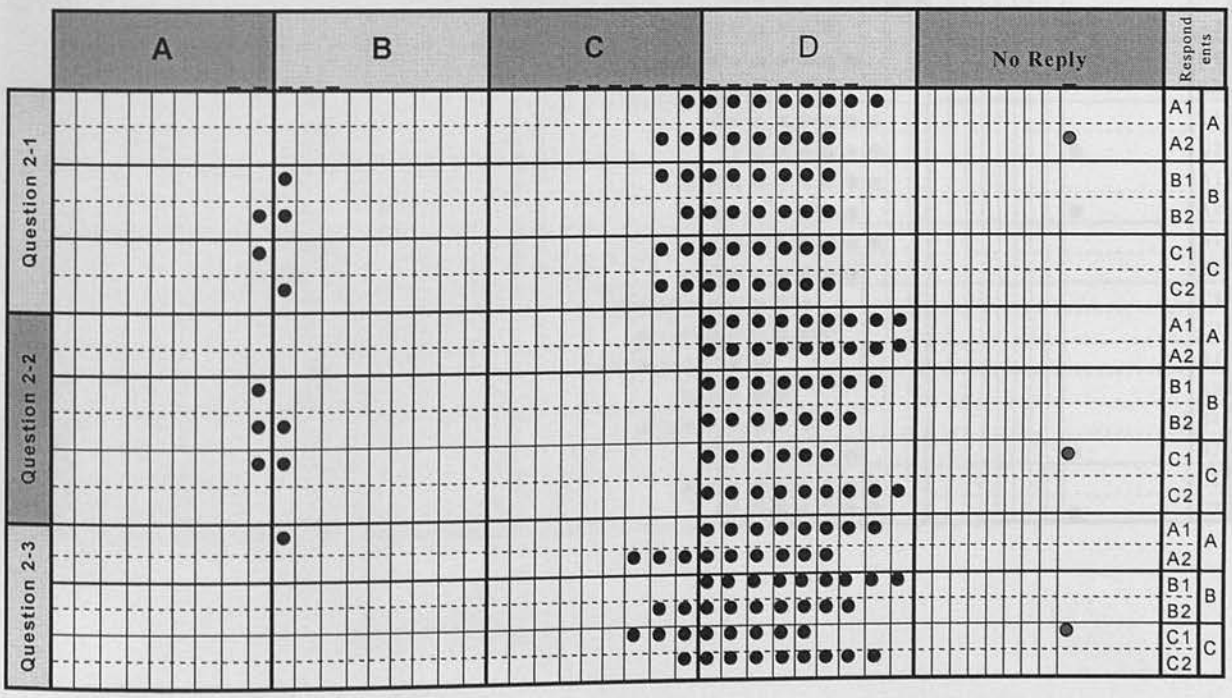
Tables No.3.2

Housing crisis and the related pattern	Frequency	Percent
Category 4	33	36.67%
Category 7	9	10.00%
Category 8	48	53.33%
Total	*90*	*100.00%*

Minor Categories Number	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
4- City is ultimately formed in accordance with residential housing patterns and consequently with rudimentary activities.	Solution Providers	Frequency	4	7	11
		Percent	12.12	21.21	33.33
	Decision-makers	Frequency	3	7	10
		Percent	9.09	21.21	30.30
	Implementers	Frequency	8	4	12
		Percent	24.24	12.12	36.36
	Total	Frequency	*15*	*18*	*33*
		Percent	*45.45*	*54.55*	*100.00*

Minor Categories Number	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
7- Considering the value of the ground, fundamental installations and reasonable economic productions, the most suitable housing pattern is flat residencies (the common and international model), and most preferably, if at all possible, in high blocks.	Solution Providers	Frequency		1	1
		Percent	0.00	11.11	11.11
	Decision-makers	Frequency	2	3	5
		Percent	22.22	33.33	55.56
	Implementers	Frequency	3		3
		Percent	33.33	0.00	33.33
	Total	Frequency	*5*	*4*	*9*
		Percent	*55.56*	*44.44*	*100.00*

Minor Categories Number	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
8- Taking the specifications, the local and the cultural situations, the elements which necessitate the diversity of urbanisation and urban life, into consideration there will be a variety of housing patterns and models.	Solution Providers	Frequency	9	9	18
		Percent	18.75	18.75	37.50
	Decision-makers	Frequency	8	9	17
		Percent	16.67	18.75	35.42
	Implementers	Frequency	4	9	13
		Percent	8.33	18.75	27.08
	Total	Frequency	*21*	*27*	*48*
		Percent	*43.75*	*56.25*	*100.00*

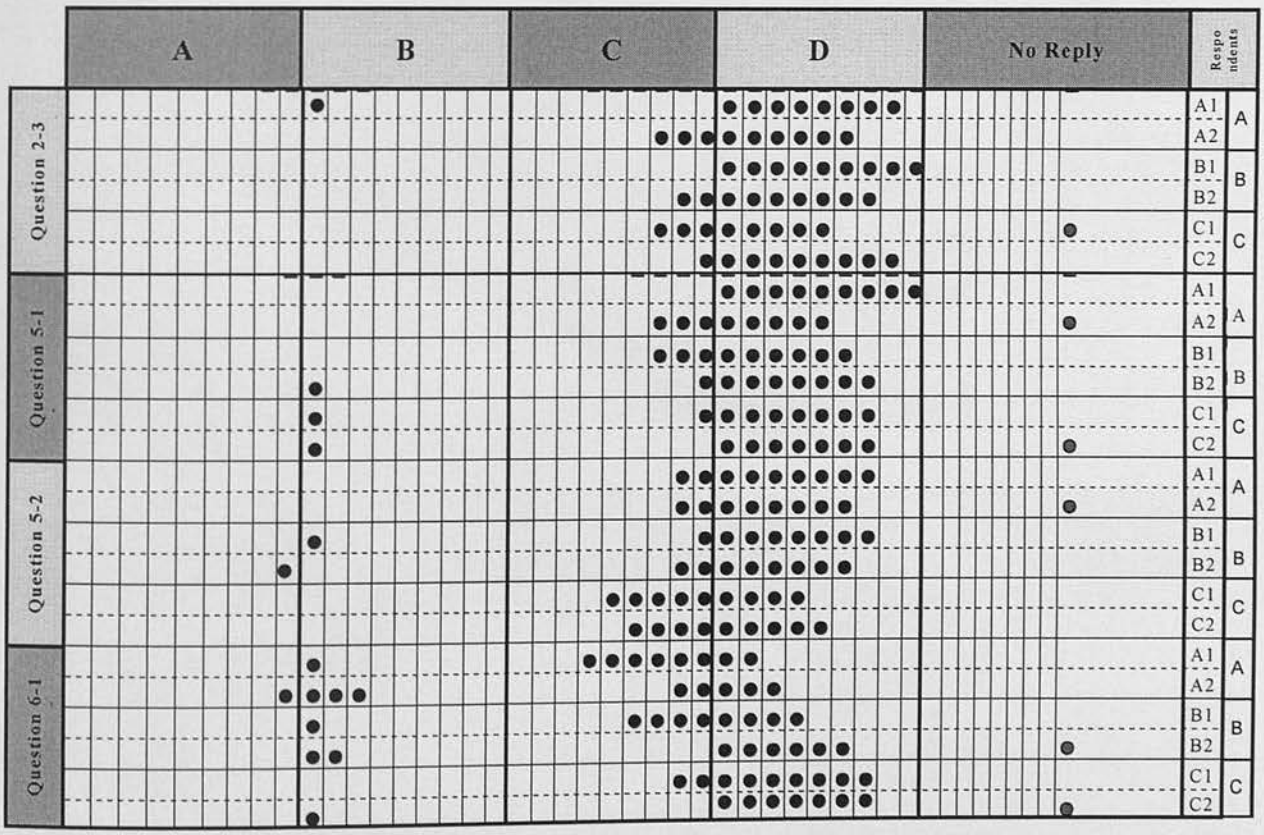


Urban planning and Involvement in the city	Frequency	Percent
Category 9	76	73.08%
Category 10	28	26.92%
Total	*104*	*100.00%*

Tables No.3.3

Minor Categories Number	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
9- Urban planning attempts and involvements in the city (in micro or macro extent) must be in a process and in connection with the whole system.	Solution Providers	Frequency	9	9	18
		Percent	11.84	11.84	23.68
	Decision-makers	Frequency	10	18	28
		Percent	13.16	23.68	36.84
	Implementers	Frequency	16	14	30
		Percent	21.05	18.42	39.47
	Total	Frequency	*35*	*41*	*76*
		Percent	*46.05*	*53.95*	*100.00*

Minor Categories Number	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
10-Urban planning attempts and involvements in the city (in micro or macro extent) is a project, which should be pursued through goal assignment, investigation, planning, suitable pattern and model selecting.	Solution Providers	Frequency	3	6	9
		Percent	10.71	21.43	32.14
	Decision-makers	Frequency	7	3	10
		Percent	25.00	10.71	35.71
	Implementers	Frequency	4	5	9
		Percent	14.29	17.86	32.14
	Total	Frequency	*14*	*14*	*28*
		Percent	*50.00*	*50.00*	*100.00*



Tables No.3.4

Effective forces in urban planning	Frequency	Percent
Category 11	14	21.21%
Category 12	52	78.79%
Total	*66*	*100.00%*

Minor Categories Number	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
11- The main forces for urban planning and involvements in a city are imposed by the state and this is the duty of the state to pursue these matters.	Solution Providers	Frequency	1	1	2
		Percent	7.14	7.14	14.29
	Decision-makers	Frequency	5	2	7
		Percent	35.71	14.29	50.00
	Implementers	Frequency	3	2	5
		Percent	21.43	14.29	35.71
	Total	Frequency	*9*	*5*	*14*
		Percent	*64.29*	*35.71*	*100.00*

Minor Categories Number	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
12- The main forces for urban planning and involvements in a city, in any forms, are to be imposed by the people. This is to be performed in a process.	Solution Providers	Frequency	9	9	18
		Percent	17.31	17.31	34.62
	Decision-makers	Frequency	6	9	15
		Percent	11.54	17.31	28.85
	Implementers	Frequency	10	9	19
		Percent	19.23	17.31	36.54
	Total	Frequency	*25*	*27*	*52*
		Percent	*48.08*	*51.92*	*100.00*

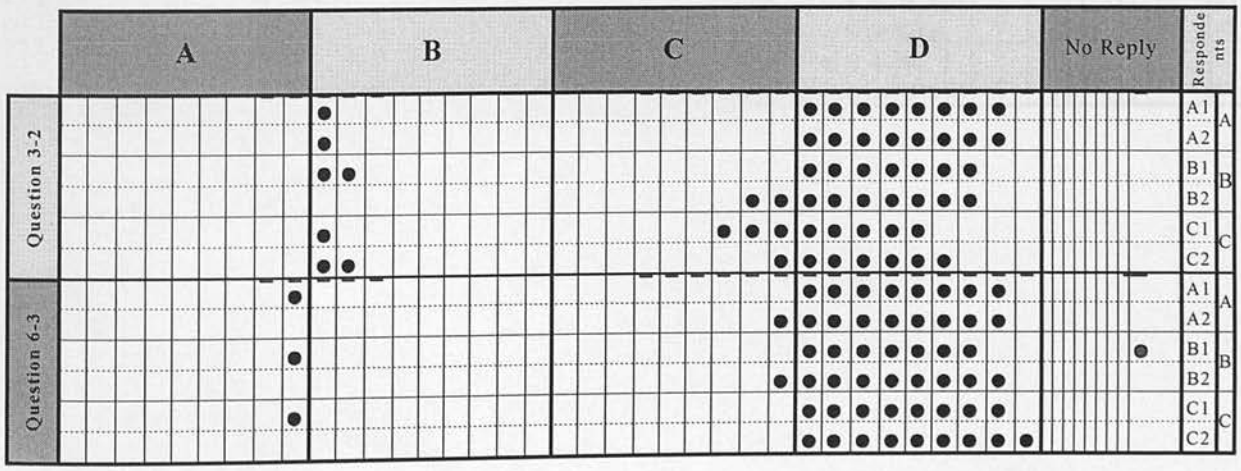
Who is to carry out urban planning?	Frequency	Percent
Category 13	44	48.35%
Category 14	11	12.09%
Category 15	36	39.56%
Total	*91*	*100.00%*

Tables No.3.5

Minor Categories Number	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
13-Urban planning and designing is a process that involves the interaction of different disciplines (architecture, urban planning, environmental studies...) and the social way of life.	Solution Providers	Frequency	9	8	17
		Percent	20.45	18.18	38.64
	Decision-makers	Frequency	8	8	16
		Percent	18.18	18.18	36.36
	Implementers	Frequency	4	7	11
		Percent	9.09	15.91	25.00
	Total	Frequency	*21*	*23*	*44*
		Percent	*47.73*	*52.27*	*100.00*

Minor Categories Number	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
14- Urban planning and designing is a process that is solely the duty of the specialists, particularly the architectures and urban planners, and should be carried out by them.	Solution Providers	Frequency	3	1	4
		Percent	27.27	9.09	36.36
	Decision-makers	Frequency	2	1	3
		Percent	18.18	9.09	27.27
	Implementers	Frequency	2	2	4
		Percent	18.18	18.18	36.36
	Total	Frequency	*7*	*4*	*11*
		Percent	*63.64*	*36.36*	*100.00*

Minor Categories Number	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
15- Public participation and the contribution of the citizens in the process of urban planning and involvement in the city, just as other current urban affairs, is a sine qua non.	Solution Providers	Frequency	6	4	10
		Percent	16.67	11.11	27.78
	Decision-makers	Frequency	10	8	18
		Percent	27.78	22.22	50.00
	Implementers	Frequency	6	2	8
		Percent	16.67	5.56	22.22
	Total	Frequency	*22*	*14*	*36*
		Percent	*61.11*	*38.89*	*100.00*

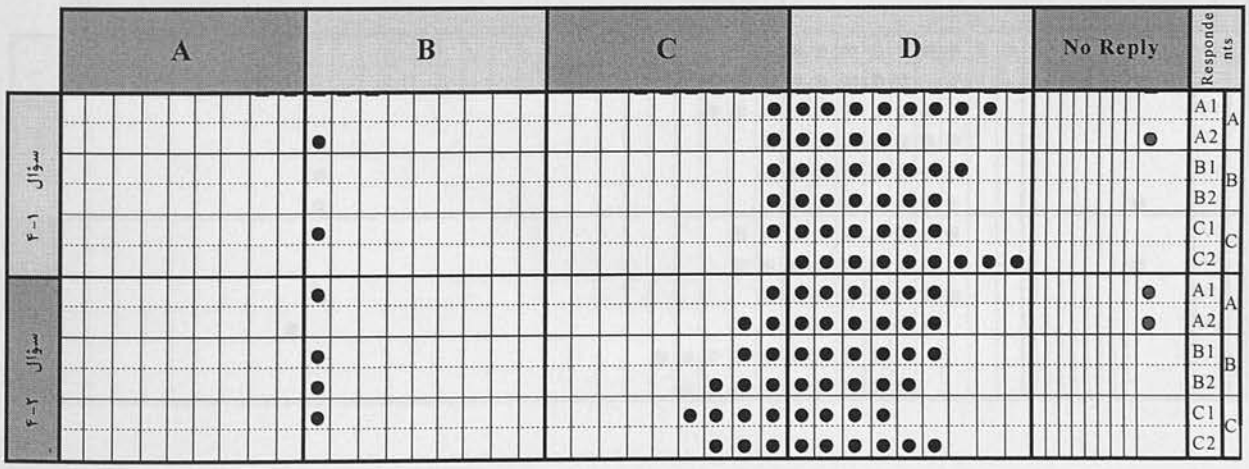


Urban usages	Frequency	Percent
Category 17	36	69.23%
Category 18	16	30.77%
Total	*52*	*100.00%*

Tables No.3.6

Minor Categories Number	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
17- Combining and amalgamating usages in every urban section and context, and not stabilising urban spaces to specific usages would lead to diversities in the way of life and the options for citizens.	Solution Providers	Frequency	6	7	13
		Percent	16.67	19.44	36.11
	Decision-makers	Frequency	5	5	10
		Percent	13.89	13.89	27.78
	Implementers	Frequency	6	7	13
		Percent	16.67	19.44	36.11
	Total	Frequency	*17*	*19*	*36*
		Percent	*47.22*	*52.78*	*100.00*

Minor Categories Number	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
18- Differentiating and separating the usages is necessary to avoid interferences and disturbances.	Solution Providers	Frequency	2	1	3
		Percent	12.50	6.25	18.75
	Decision-makers	Frequency	3	4	7
		Percent	18.75	25.00	43.75
	Implementers	Frequency	4	2	6
		Percent	25.00	12.50	37.50
	Total	Frequency	*9*	*7*	*16*
		Percent	*56.25*	*43.75*	*100.00*

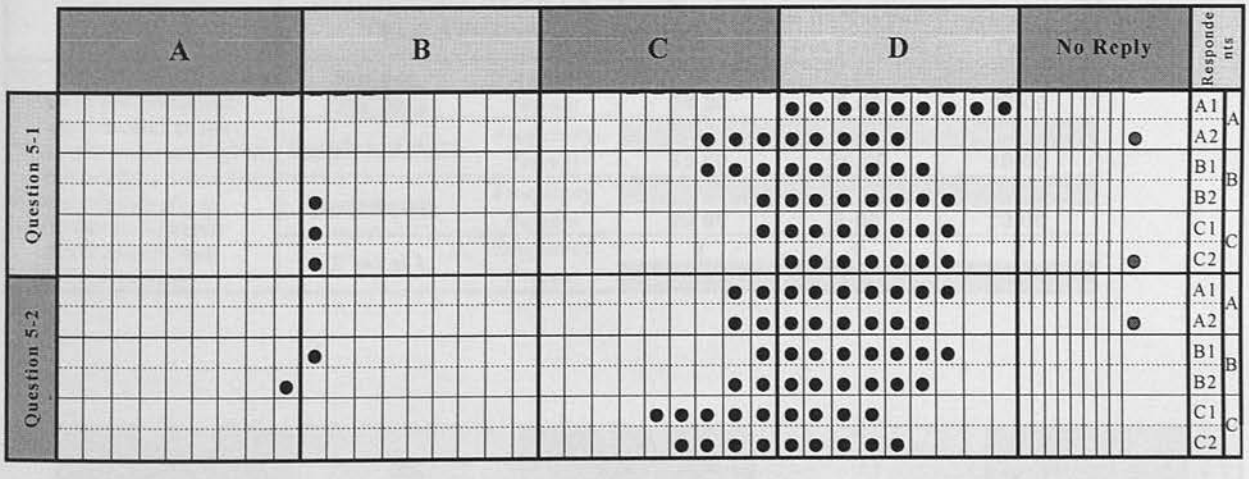


Urban elements and standards	Frequency	Percent
Category 5	73	68.87%
Category 6	33	31.13%
Total	*106*	*100.00%*

Tables No.3.7

Minor Categories Number	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
5- Models, patterns, standards and other urban elements are the outcomes of the interactions of different disciplines on one side and the interactions of different life aspects on the other.	Solution Providers	Frequency	12	11	23
		Percent	16.44	15.07	31.51
	Decision-makers	Frequency	15	13	28
		Percent	20.55	17.81	38.36
	Implementers	Frequency	9	13	22
		Percent	12.33	17.81	30.14
	Total	Frequency	*36*	*37*	*73*
		Percent	*49.32*	*50.68*	*100.00*

Minor Categories Number	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
6- Models, patterns, standards and other urban elements are specific scientific phenomena that make allowances for environmental issues, economic situation...	Solution Providers	Frequency	4	7	11
		Percent	12.12	21.21	33.33
	Decision-makers	Frequency	3	7	10
		Percent	9.09	21.21	30.30
	Implementers	Frequency	8	4	12
		Percent	24.24	12.12	36.36
	Total	Frequency	*15*	*18*	*33*
		Percent	*45.45*	*54.55*	*100.00*



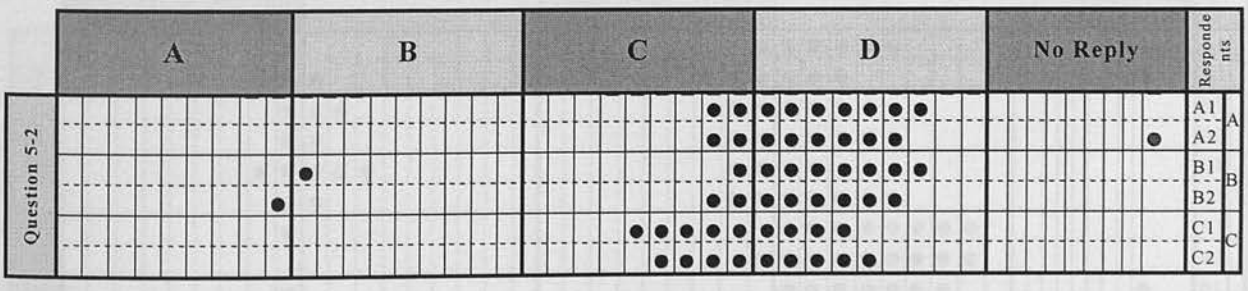
Tables No.3.8

Old and valued context	Frequency	Percent
Category 15	39	66.10%
Category 19	15	25.42%
Category 20	5	8.47%
Total	*59*	*100.00%*

Minor Categories Number	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
15- The identity of the city and urbanisation is based on the past and the background, the present and the current civil life, and the future designs and plans.	Solution Providers	Frequency	8	7	15
		Percent	20.51	17.95	38.46
	Decision-makers	Frequency	7	6	13
		Percent	17.95	15.38	33.33
	Implemeters	Frequency	6	5	11
		Percent	15.38	12.82	28.21
	Total	Frequency	*21*	*18*	*39*
		Percent	*53.85*	*46.15*	*100.00*

Minor Categories Number	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
19- The urban development plans have to be futuristic, meanwhile paying attention to the old context.	Solution Providers	Frequency	2	2	4
		Percent	13.33	13.33	26.67
	Decision-makers	Frequency	1	2	3
		Percent	6.67	13.33	20.00
	Implemeters	Frequency	4	4	8
		Percent	26.67	26.67	53.33
	Total	Frequency	*7*	*8*	*15*
		Percent	*46.67*	*53.33*	*100.00*

Minor Categories Number	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
20- The old context, apart from the historical monuments, is not worth to be preserved particularly when they are considered as obstacles towards development and reconstruction.	Solution Providers	Frequency	1		1
		Percent	20.00	0.00	20.00
	Decision-makers	Frequency	2	1	3
		Percent	40.00	20.00	60.00
	Implemeters	Frequency	1		1
		Percent	20.00	0.00	20.00
	Total	Frequency	*4*	*1*	*5*
		Percent	*80.00*	*20.00*	*100.00*



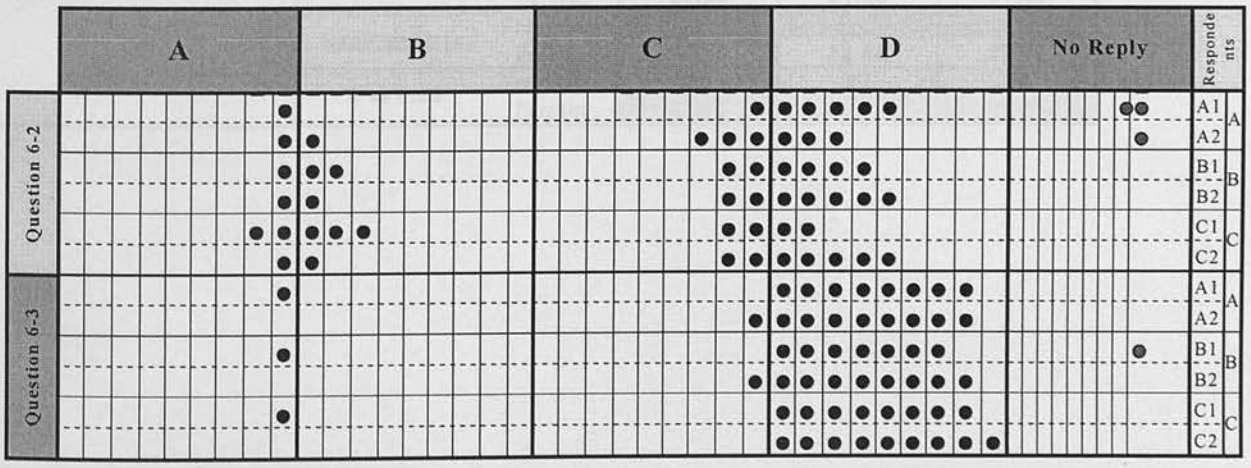
Tables No.3.9

The reasons for the failure of the Navvab Project	Frequency	Percent
Reasons related to the role of the state	60	49.18%
Insufficiency and lack of comprehensive knowledge and experience	16	13.11%
Lack of participation and coordination	46	37.70%
Total	*122*	*100.00%*

The reasons for the failure of the Navvab Project	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
Categories 21-22-23-29	Solution Providers	Frequency	13	12	25
		Percent	21.67	20.00	41.67
	Decision-makers	Frequency	7	11	18
		Percent	11.67	18.33	30.00
	Implementers	Frequency	11	6	17
		Percent	18.33	10.00	28.33
	Total	Frequency	*31*	*29*	*60*
		Percent	*51.67*	*48.33*	*100.00*

Insufficiency and lack of comprehensive knowledge and experience	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
Categories 24-27	Solution Providers	Frequency	3	2	5
		Percent	18.75	12.50	31.25
	Decision-makers	Frequency	1	0	1
		Percent	6.25	0.00	6.25
	Implementers	Frequency	6	4	10
		Percent	26.67	25.00	62.50
	Total	Frequency	*37.5*	*6*	*16*
		Percent	*62.50*	*37.50*	*100.00*

Lack of participation and coordination	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
Categories 25-26-28	Solution Providers	Frequency	11	11	22
		Percent	23.91	23.91	47.83
	Decision-makers	Frequency	5	6	11
		Percent	1087.00	13.04	23.91
	Implementers	Frequency	7	6	13
		Percent	15.22	13.04	28.26
	Total	Frequency	*23*	*23*	*46*
		Percent	*50.00*	*50.00*	*100.00*



Tables No.3.10

The denunciation on the Navvab Project	Frequency	Percent
Inadequate investigation and planning	36	33.33%
The performance of the highway	37	34.26%
Lack of facilities and prerequisites	35	32.41%
Total	*108*	*100.00%*

Inadequate investigation and planning	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
Categories 37-42-43	Solution Providers	Frequency	7	2	9
		Percent	19.44	5.56	25.00
	Decision-makers	Frequency	7	6	13
		Percent	19.44	16.67	36.11
	Implementers	Frequency	7	7	14
		Percent	19.44	19.44	38.98
	Total	Frequency	*21*	*15*	*36*
		Percent	*58.33*	*41.67*	*100.00*

The performance of the highway	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
Categories 38-40-41	Solution Providers	Frequency	4	2	6
		Percent	10.81	5.41	16.22
	Decision-makers	Frequency	7	11	18
		Percent	18.92	29.73	48.65
	Implementers	Frequency	6	7	13
		Percent	16.22	18.92	35.40
	Total	Frequency	*17*	*20*	*37*
		Percent	*45.95*	*54.05*	*100.00*

Lack of facilities and prerequisites	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
Categories 38-39-41	Solution Providers	Frequency	3	1	4
		Percent	8.57	2.86	11.43
	Decision-makers	Frequency	7	11	18
		Percent	20.00	31.43	51.43
	Implementers	Frequency	5	8	13
		Percent	14.29	22.86	37.14
	Total	Frequency	*15*	*20*	*35*
		Percent	*42.86*	*57.14*	*100.00*

Tables No.3.11

The propositions for the Navvab Project	Frequency	Percent
Development of the public sphere	51	67.11%
Comprehensive investigation and scrutinisation	25	32.89%
Total	*76*	*100.00%*

Development of the public sphere	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
Categories 30-34-35-36	Solution Providers	Frequency	5	10	15
		Percent	9.80	19.61	29.41
	Decision-makers	Frequency	6	13	19
		Percent	11.76	25.49	37.25
	Implementers	Frequency	8	9	17
		Percent	15.69	17.65	33.33
	Total	Frequency	*19*	*32*	*51*
		Percent	*37.25*	*62.75*	*100.00*

Comprehensive investigation and scrutinisation	Respondents Based on Their Position		Respondents based on their involvement situation in Navvab Project		
			Involved	Not Involved	Total
Categories 38-40-41	Solution Providers	Frequency	8	1	9
		Percent	32.00	4.00	36.00
	Decision-makers	Frequency	3	5	8
		Percent	12.00	20.00	32.00
	Implementers	Frequency	4	4	8
		Percent	16.00	16.00	32.00
	Total	Frequency	*15*	*10*	*25*
		Percent	*60.00*	*40.00*	*100.00*

APPENDIX III

Tehran Specialized Council (TSC)

In the autumn of 1997, when the one hundredth session of the TSC had been held, the author was given the task of carrying out an investigation with respect to the performance of the Council, and its achievements. The discussions of 99 sessions had been recorded and were available. These were studied and the findings were reported to the Council itself.

The results were also printed in the Annual Document of the Council ???under the heading of "Results of Discussions in the Tehran Specialized Councile (TSC) Meetings" as an article covering pages 35-40 of the Document plus 15 pages of attachments.

What follows is a free translation of the paper, which is provided here with three objectives:

1. *To portray the approach of one of the city's specialized teams with some of the problems facing the city, the team being engaged in the process of preparing the grounds for decision-making by the authorities.*
2. *To present the city's problems and issues as seen by the specialized team during the years 1992-1998.*
3. *To indicate the approach of the author with respect to the problems of the time.*

Introduction

At a time when developmental activities were reaching a zenith in the consultation and planning circles that were beside the decision-makers, it was felt that a continuous process of preparing the grounds for decision-making was needed. The atmosphere in "Tehran Engineering & Technical Consulting Organization"(TETCO), provided on opportunity to go beyond the usual duties and to form a committee to discuss city planning in general and Tehrans' issues in particular. The committee was to be formed by a number of consultants, experts and specialist in urban planning and development.

As a first step a large number of the most qualified experts and specialists were invited. (A copy of the letter of invitation is attached). Following the invitation the City of TSC was formed with a number of members none of who was committed or duty-bound to the Municipality as far as the Council was concerned. The Council comprised of:

1-Nine experts in urbanism and urban development who had over 30 years of work experience on average.

2-Nine members of academic boards of various universities, specialized in architecture, city development, construction, and urban planning, with over 30 years of experience on average.

3-Two of the senior managers in the Municipality with academic qualifications and work experience in architecture and urban planning, having 25 years of experience on average.

The Council is the only such gathering that regularly convenes without being connected to any official organ or government or public entity. Furthermore, the members are not paid for participating. Even so the Council has been doing its job for a long time now.

The Council was formed early autumn 1992. In its meetings, as deemed necessary, other experts participate upon invitation.

The first meeting of the Council was held on 14 October 1991. Since then meetings have been held and continue to be held every fortnight, on Wednesdays from 15:00 to18:00 hours. The meetings discussion subjects that have been suggested by the members or issues referred to the Council by the senior management of the Municipality. A summary of the discussions is sent to the managers for their information, and to help them in their decision-makings. Further, a summary together with conclusions is published annually in autumn as the Council's "Document". By the time this study began, 102 meetings had taken place and when its revision was commenced 115 meetings had been held, over a period of seven years.

Objective

One issue that was somehow brought up and discussed in almost every session was the question of how the Council could institutionalize itself methodologically and how useful it could be. There were several major topics in this connection:

1-The Council creates a collective realm for discussing city issues, independently of any organ. This independence frees the members from any obligation. Yet once it becomes institutionalized in the circles of specialists as an NGO it confronts threats to its being and survival. Thus a systematic cognition of itself based on its past achievements becomes necessary.

2-The Council and its performance and discussions among the members and its approach to issues and problems, should be assessed on the basis of past achievements, so that it may be guided towards the ideal situation (as reflected in the Articles of Association and the Regulations).

3-The subjects discussed in the Council and its meetings should concern city's issues and the Council shall deal with them as a body of experts and qualified, experienced professionals. At the same time the subjects and issues can be used to prepare future agendas more effectively and lead to more useful results.

Method

1- To begin with four areas of study were set according to which the points discussed in the meetings and the results would be categorized:

A. Subjects that Deal with the City as a Whole

A city must be considered as a macrosystem which is a systematic, vital and conceptual combination of economic, social, political, physical, ecological, management, cultural ...subsystems and is in itself a subsystem. The macrosystem must have an operating system to monitor and supervise the interrelations between the subsystems and between the macrosystem and the subsystems.

Depending on whether or not a clear, common cognition of the city in general, and Tehran in particular, exists in the minds of the Council members, one can expect what the results of the Council meetings would ultimately be. Naturally, one would expect these results to be related to the reality of the city.

B. Subjects that Deal with Elements within the City

The City is made up of a collection of living elements (vital organs), and the relevant programs which are in turn made up of parts (elements, programs…). In the same way that the concept of the city (as a macrosystem) derives from life in collective domains, between subsystems, then the meaning, identity, function and efficiency of each subsystem in the city also derives from life in the collective domains and the relationship between the elements and parts in those domains.

Each of the subsystems making up the city as a macrosystem, (such as elements, programs …) has an operating system that monitors the atmosphere and collective domains within the system. Failure to systematically view any one of the city phenomena, elements or programs, or failure to gain a proper cognition of the operating system, would mean that the city's managers, intellectuals and executives will have different views on the city's phenomena, subsystems and programs. This would be the case as regards both discussions and exchange of views, and executive operations and interventions. Furthermore, it will lead to the phenomena's becoming distorted in the eyes of the viewers.

C. Subjects that Deal with the Juxtaposition of City Phenomena

To identify the city's position in a larger (upstream) system (for example, Tehran's position in the regional ecology) and gain a proper understanding of the positions of the elements and subsystems that make it up, necessitate the establishment of systematic relations between each and every subsystem with the system.

Each and every city phenomenon and subsystem (whether element or program) as a vital organ can only nourish on the environment in which it lies (the upstream collective domain), if it is suitably positioned within the system. In such a case it can feed on the environment, grow and develop and then the developments and cooperation in the collective domain will help the macrosystem itself to grow.

Whenever a phenomenon is positioned anywhere but in the right place, ie its own proper position, it will disrupt development, will itself degenerate or become dependent on an outside system, outside of the city and alien to it.

D. Subjects that Deal with Scale and Proportion

For proper formation of a system, it would be necessary for all the elements that make it up to be properly related, and to agree in scale and proportion. Further a city's different systems, large and small, must be interrelated so that they can cooperate and remain stable. Each subject's proper position in the city must be carefully identified, and it must be viewed at a suitable scale. The system and the subsystems must be identified and the internal and external relations of the system (each at its own scale), must be established. Viewing each and every subject in relation to the other elements, will save energy in the system, avoid wastage of ability and prevent disruptions in the supply of energy required for the movement of the various systems.

2- As the next step in this research, the discussions that had taken place (and had been recorded and then taken down from the tapes)* were studied in detail. Wherever necessary the tapes were heard again and again to get the exact meaning and nuances (to get the meaning hidden behind the stresses and tones). Thus the agendas, the main themes of discussion and the conclusions were carefully assessed on the basis of the four categories. Totally 106 items of agenda were identified that had been discussed in 99 meetings. The results of these assessments are summarized in Figure ?

Each subject of discussion and the relevant discussions were, either directly or indirectly, related to all four areas. However, in this research

*The discussions which the council had during 99 of its meetings add up to 1,250 A4 pages (in Persian) were studied at the senior expert (Master's Degree) level over 5,940 hours. At the expert (Bachelor's) level 3,580 hours were spent for supplementary studies, mainly field work.

each subject, depending on its level of importance and degree of influence in the process of discussions as well as comments and exchanges of view, has been related to two categories only. Further, the first priority has been given to the main subject of discussion in the relevant meeting with a value twice as large as that of the second subject. In the last column of the Assessment Figures the first priority subjects have been indicated by letters A, B, C, and D, and the second priorities by a, b, c, and d.

Since some subjects of discussion extended beyond one single session and because these were repetetive or similar sessions, the subjects and agendas were summarised and classified (Table 2). The Specialized Council, in one of its first sessions, offered a four-category classification, according to the subjects. These were classified as dealing with the four areas of: Physical Realm, Ecological Realm, Cultural Realm and Management Realm.

In the present study this classification has been respected but another environment – that which prevailed over the Council itself – has been added to them to allow a useful comparison (Table 3-1 to 3-5). A summary of the tables is given in Figures 3 & 4, under the heading "Conclusions".

Conclusions

A review of the tables and the material gathered indicates that:

1- In 99 meetings, 106 items of agenda were covered, ie each item received 93% of the time of a meeting or each meeting dealt with 1.07 items.

2- In 99 meetings covering 106 items of agenda, 55 distinct subjects were discussed each of which, therefore, received 1.8 meetings and 1.92 items of agenda dealt with it.

3- Out of the 106 items, 30% (31 items) had specific results and 70% (75 items) did not. Out of the 55 subjects, 36% (20 subjects) came to result and 64% (35 subjects) did not.

4- If we give 2 points to the first priorities (A, B, C, D) and one point to the second (a, b, c, d), then

a) In classes 2 and 3 (Figures?), the percentage of items of agenda that led to results and the percentage of the number of sessions that were fruitful were higher than in the other classes (42% and 25% respectively). At the same time a more balanced combination of the four criteria (areas A, B, C, D) was used.

b) In case of the subjects and items which were related to general concepts and the city as a whole (classes 4 & 5) criteria A and D had the smallest roles. These were, in fact, the groups that led to fewest results.

c) Class 5 issues led to least results of only 10%. Woerse still is the low rate of of the number of meetings, only 4.5%. This is very noteworthy as these issues dealt mainly with the Council itself and its view of the city.

Finally, it can be concluded about the performance of the Council, that:

1- On the whole the Council as a unique phenomenon has been ineffective in its performance in case of subjects that concerned the city as a whole. Should it wish to continue such discussions it must be somehow transformed: changes must be made in its constituent elements or their interrelationships and procedures.

2- The " Council" has acted somewhat ineffectively in scaling the subjects it dealt with, to itself. This can be the consequence of failure to define the subject, its position in the city, or the position of the Council before the city.

3- The "Council" has not been able to deal with any item in several meetings. (Please refer as an example to the issue "Development Management or the City Development Control and Guidance System" which was discussed over 8 sessions).

4- The "Council" must seek to define itself and its position inside the city and the system of identifying and controlling developments, both as regards its understanding of the upstream environment and in its efforts to find the scale and proportion of its subjects.

5- The "Council" is quite ineffective in dealing with issues that demand a wide scope of specialties. It is only capable of dealing with sub-city level issues that do not require extensive specialties.

6- The "Council" needs to strengthen its constituent elements and the relations among them. It must also vastly improve its abilities in expertise both, in theoretical discussions and essential definitions of general concepts.

Letter of Invitation Addressed to Experts in City Affairs

The hasty growth of Tehran has turned a small town of 160,000 inhabitants in 1891, into a city 650 km^2 in area with a population of some 7,000,000. Today, Tehran as a metropolis continues its growth far ahead of the other large cities of the country. Obviously, as the population increases and the area of the city that provides services enlarges, the difficulties become more diversified and new forms of management bottlenecks emerge. The Management of any mother-city, in all areas and particularly as regards development, must not only preserve what already exists and use them efficiently, but must respond to the growing needs in proportion to the rate of population growth and the rate of expansion of the city and the activities within it. The management must take longer and faster studies towards overcoming the problems and attaining a brighter future in the confusion of present difficulties and ambiguities.

The immense variety of difficulties which have arisen because of the uncontrolled growth of Tehran city embraces cultural, social, economic and even physical issues. The physical issues which are the outcome of socio-economic changes and are themselves affected by the physical developments are diverse and include such areas as construction, traffic networks, work and activity spaces, transportation systems, distribution of water, sewerage, collection and disposal of surface waters, the health and hygiene of the inhabitants, city installations and equipment, facilities for leisure and recreation of the inhabitants, creation and maintenance of open/green spaces and many other areas.

City growth is inherently uncontrollable and must be controlled and directed and this needs a very skillful force, a wide vision and a very comprehensive outlook. Thus, it appeared that, to control the problems involved in the growth and present

function of the city, and more importantly to predict future developments and control actions that are taken on the spur of the moment, it was necessary to create a strong and cohesive organization to back up the executive committees of municipality supporting them in technical and executive areas. This would not only help resolve the current problems and clear the bottlenecks, but it would also greatly help direct future developments.

This view led to the creation of the Engineering and Technical Consulting Organization of the city of Tehran and Engineering and Development Organization of the City of Tehran. The first was intended to act as the right arm of the municipality, to direct and control development projects being planned and reviewed in the various essential issues. It officially began its activities in autumn of 1990, and by now it has continued to provide its services for two years. During this time it has served to direct and monitor 230 development projects in the city of Tehran.

The large volume of work performed by the Constancy Organization and its Projected increasing volume, make it necessary that it academic and technical abilities be enhanced so that it may be more far-sighted and better able to predict the future with it onerous difficulties and development. In this way the Organization will be able to direct and control these future developments.

On the journey from today to tomorrow, it is possible to confine matters to meeting the day to day needs and requirements. It might also be possible to deal with problem without any scientific and intellectual support from experts in city affairs. But it is possible to combine intellect with action and to go forward to welcoming tomorrow with greater confidence and determination. This can be made possible through bringing about a strong connection between the executives and those intellectuals who are experts in city affairs, and of Iranian cities in general.

In the modern world current problems and city infrastructure issues are dealt with and new solutions for them are rapidly found with the help of intellectuals and experts and thought is speedily converted into effective action. The waves of this approach

have rippled to the rest of the nations, and has raised the expectations of the citizens today in all cities that face tow many problems. This makes the duties and tasks of the municipal authorities far more onerous and puts greater responsibility on the shoulders of the Society's intellectuals. And this is without counting the extensive needs of the cities whose populations and thereby the services required are rapidly growing.

There is no doubt as to the value of combining academic knowledge and action. But the grounds have to be prepared and conditions made ripe for this combination to form effectively. The cooperation and guidance of the authorities and experts will result in far-sighted expansive policy-making, propose general ideas for directing developments more sensibly and thought fully and offer effective solutions to short-term issues.

The main idea in this invitation to intellectual cooperation made to the honorable experts and academics is the formation of a council that in possession of sufficient knowledge on the issue and affairs of Tehran metropolis.

And fully aware of the latest scientific and research achievements worldwide, as to be able to assist the municipality directors and managers and those in charge of implementation of development projects in the metropolis of Tehran. They are expected to put forward their comments and criticisms beyond unofficial small gatherings, to face the directors and city authorities, their experts and consultant and challenge them in a constructive way. Thus, it is hoped, the opportunity and occasion for receiving actions and correcting them will not be lost. This is a matter of great importance as the effects of town planning projects are extensive and very long-lasting and in most cases there is little or no chance of making up for the wrong done.

Presently, Tehran has become a model for the rest of Iranian cities. Most of the policies and trends set by the city and implemented there are rapidly copied and adopted by the other town and cities and the effects are widespread. This puts a great burden, enormous responsibility on the shoulders of the city authorities and technical experts, especially since Tehran is the capital of a the Islamic Republic of Iran which aspires to become an exemplary model for the world. In addition to facing the task of

resolving the problems that face an ordinary metropolis it is the leader in the transformation of cities and the flag-bearer in the movement towards an Islamic society.

The city authorities, intellectuals and experts, who are confronted with this critical responsibility, are asked by the Engineering & Technical Consultancy Organization to step forward and make the alliance.

Today, Tehran is a city (urban region) which encompasses 14 large and small residential areas (towns) of which the problems are put on the mother-city. It needs to change, transform and improve, in order to survive. Policy-making in any city's on growth and development is a huge responsibility. It must eliminate the shortcomings and disorders on the one hand, and on the other it must prevent irregularities, especially physical irregularities, through sensible direction of development and construction. This is particularly more critical in Tehran where the growth pattern has not developed in proportion the needs of the inhabitants. The expert and intellectual circles offer an opportunity for discussion and exchange of views with the city authorities. They can act as a resort for sensible and fundamental conclusions (decisions) regarding the way city affairs should be directed, how its development be guided, and how current, executive problems should be resolved. It can provide a clear picture of the future upon which decision-makers and executives can act.

The questions now facing us, are :

- In what direction is today's Tehran proceeding and where is the final destination?
- What is the picture of the future Tehran, as the capital of a great Islamic country and metropolis facing almost endless problems?
- How should its potential for development be assessed and exploited?
- What are the executive levers and town planning projects that can be effectively used towards the flourish of these potentials?
- What could be proposed as the optimal course of action?
- How can one proceed towards flourishing Islamic values within the physical body of this city?

It is hoped that by suggesting and considering these and dozens of other question in the domain of city issues, a step can be taken towards resolving those hat face Tehran today, and will do so tomorrow.

Table No. 1

Discussion Diagram of TSC

No.	Date	Discussion Subject – Meeting Order	Main Topics	Dependant Meetings	Result	Assessment
1	Oct. 14, 1992	Cooperation of experts in city affairs and executive managers	- Surveying cooperation & coordination nature of urban affairs authorities & executive managers - Specifications of councilor society, their position & actions limit - The limit of under assessing problems, vision frame for urban affairs	2, 3, 4, 5	The Principle of cooperation & coordination of urban affairs authorities and executive managers of the city were confirmed and it was decided to establish the meetings every two weeks.	**B** c
2	Oct. 28, 1992	Cooperation of experts in city affairs and executive managers	- The purposes of council establishment - Determining the position of individuals composition & council organizational activities - Assessable subjects & council secretariat	1, 3, 4, 5	A sub-committee was assigned to take action in compilation of Council's Articles of Association regarding the offered view-points in the meeting.	**A** c
3	Nov. 17, 1992	Cooperation of experts in city affairs and executive managers	- Actions frame, Assessable subjects - Surveying the coordination or interference of councils' work with organizational establishments of the Municipality - Assessing the multi dimension nature of urban affairs	1, 2, 4, 5	It was agreed that regarding the view-points, a group consists of Dr. Falamaki, Engineer Kalantari & Eng. Zeinoddin compile the Council's Articles of Association.	**D** c

4	Dec. 2, 1992	Cooperation of experts in city affairs and executive managers "Council's Internal Regulations"	- Surveying the offered Regulations of Council - Surveying specialized sub commissions of council, the subjects - Meetings continuation & alternation of their establishment - Mutual responsibility of Council & Municipality	1, 2, 3, 5	The Regulations was prepared through members agreement and it was accepted as Council's Internal Regulations.	**B** c
5	Dec. 16, 1992	Cooperation of experts in city affairs and executive managers "Council's Internal Regulations"	- Surveying the "Council's Provisional Articles of Association" -Manner of approving suggestions & execution of the council approvals - Origin of council Power & authority - Manner of continuation of council's work at the frame of suggested Regulations	1, 2, 3, 4	The meeting had no definite result. "Council's Provisional Articles of Association" which was suggested by sub-committee put into discussion and it was agreed that the committee together with Mr. Eng. Salimi, through obtaining other members opinions complete the work & offer it.	**C** b
6	Dec. 30, 1992	Revival of historic and valuable fabrics of the city	- Preserving valuable buildings - The necessity of general & fundamental confrontation with historical structures - The importance of selecting a proper view-point & methodology in confrontation - The importance of offering constant & floating programs in historical structures - Recognizing the difficulties in confrontation with historical structure - The reasons for non efficiency of studies & the plans of preserving & reviving old structures	7, 8, 9, 10, 12, 13	**The meeting had no definite result.**	**C** b

7	Jan. 13, 1993	Revival of historic and valuable fabrics of the city	- Economical-social Bases, & matrix-operational difficulties - Historical Structures: stating the experiment of Shiraz & Isfahan - Structural & Operational System of historical structures - Economical Methods of reviving historical structures - The necessity of connection of historical structures affairs & urban programming procedure - Urban reviving charges on destroyed structures	6, 8, 9, 10, 12, 13	**The meeting had no definite result.** It was advised: For the expansion of under discussion subject, after the meeting reached to a general conclusion, the authorities of the related organs were invited to attend next meetings.	**B** c
8	Jan. 27, 1993	Revival of historic and valuable fabrics of the city	- Policy of confrontation with historical & valuable structures of the city - Importance of educational & cultural confrontation for creating a proper bed - The necessary of recognition main root of executive difficulties & blind-points - The importance of experience assessing & methods amendment in practice	6, 9, 10, 12, 13	**The meeting had no definite result.** For obtaining practical conclusion from the discussion, the negotiations were postponed till the next meeting and a specialized committee consisted of 3 members was allocated to be responsible for conclusion offering and compiling fundamentals during the meetings.	**B** c
9	Feb. 10, 1993	Revival of historic and valuable fabrics of the city	- The limitations of discussions fluctuation in relation with stated subjects at the council - Establishment of specialize sub-committees of the council - The report of Historical Structures Preserving & Renovating Committee and discussing about it	6, 7, 8, 10, 12, 13	**The meeting had no definite result.** Concluding was transferred to the Specialized Committee.	**C** d

10	Feb. 24, 1993	Revival of historic and valuable fabrics of the city (Stating the Problem)	- The basis & limit of confrontation with valuable & historical structures - The report of Historical Structures Renovating & Renewing Committee The report of Mr. Eng. Kashalntari in relation with the Government incomes obtained from increased value related to constructing plans in common & the plans of renovating historical & old structures specifically - The necessity of allocating economical view in confrontation with historical & old structures - Establishment of specialized committee, work transferring and concluding their discussions	6, 7, 8, 9, 12, 13, 39, 63	**The meeting had no definite result.** Concluding was transferred to the Specialized Committee.	C
11	April 14, 1993	Iranian Scientific Academy, architectural competition	- Architectural Competition of Iran Sciences Academic & its organs - The specifications of Architectural Competitions in Iran	12, 19	**The meeting had no definite result.**	D

12	April 28, 1993	1- Iranian Scientific Academy, architectural competition	- Performing the competition of Sciences Academic & the result of Extraordinary Meeting - Method of Assessing valuable structures & Its criterion - Method of identification valuable structures & structure identifying confrontation with them	11, 19	It was agreed to establish a committee consists of some of council members on the following week and assess the subject offering, method of performing & competition program.	**D**
		2- Revival of historic and valuable fabrics of the city	- Reviving, utilization & preservation from valuable structures - Operation area of different organizations in perseverance & reviving of valuable structures & historical areas - Hearing the brief report of Historical Structures Renovating & re-constructing Committee	6, 7, 8, 9, 10, 13	It was agreed that the Council Secretariat should conclude the discussion offered in the 6th to 12th meeting about historical structures reviving and present such a conclusion to the Council at the next meeting.	C d

13	May 12, 1993	1- Plan for Tehran's earthquake zone (Project repot)	- Offering the report by Studying Group in relation with Tehran city seismic Plan	53	**The meeting had no definite result.** It was agreed that the secretariat concludes the opinions and offers them to the plan study team, so that they can take action in continuing & executing the plan.	**A** b
		2- Revival of historic and valuable fabrics of the city	- Urban renovation & assessing valuable structures - Work Syllabus of Historical structures Renovating Committee - Collecting the documents related to the past studies made of valuable structures	6, 7, 8, 9, 10, 12	Regarding the summery of last meetings discussions (6^{th} to 12^{th} meeting), services explanation of operations of Historical Structures Renovating Committee was determined and approved.	**B** C
14	May 26, 1993	Discrepancies between plans and executions	- Method of compilation technical & engineering services -The problems caused by the Employer, Councilor, & Contractor - Educational System in urban development and construction - Professions & Specializations variety in constructing & urban development affairs	15	**The meeting had no definite result.** It was suggested: The Executive Managers of the huge projects of Tehran Municipality were invited to participate in the next meeting for exchanging opinions. A group consisted of members was established for surveying the subject.	**B** d

15	June 16, 1993	Discrepancies between plans and executions	- Lack of Specialized Power in some of the classes (technicians & ...) - Financial & Law Regulations and their non-connection - Technical & Engineering Data Bank	14	The main reasons of contradiction can be summarized in three basis: Scientific & Educational, Managing and Executive.	**D**
16	July 7, 1993	High-rise buildings	- The Municipality Habit & Operation and Urban Renovation Policies - Application & Technical , Installations & Safety Standards of High Buildings Project - Urban lands proper for high buildings construction - Increased value caused by high buildings & its connection with urban development - Civil laws and urbanization & architecture regulations of high buildings	17, 20, 21, 61, 77	**The meeting had no definite result.** It is advised to place High Buildings Project in the educational courses of the faculties of Architecture & Urban Development.	**D**
17	Aug. 4, 1993	High-rise buildings	- The reasons for insuring illegal license and the absence of Structural & urbanization regulations & criterions for high buildings - The necessity for collecting deeds to build high structures - The necessity for surveying lands potential in order to establish high buildings - High buildings and their relation with urban general plans	16, 20, 21, 61, 77	It was agreed to fulfill a researching report together with square studies in connection with the high buildings by the Council Secretariat.	**C** d

18	Aug. 25, 1993	Abbasabad and prayer ground of Tehran	- The method of confronting with the problem of Abasabad & Tehran Mosalla lands - Situation of transferring lands to the applications - Matrix Planning in relation with perspective, methodology, urban designing scales & criterions - Placing of Tehran Mosalla in Abbasabad lands and its effect on the around areas - Comprehensive Plan (1347) and the role of Abbasabad lands in Tehran city development - The Municipality as the lands owner	------	Responding to the problems of Abbasabad lands (as free lands in the center of the city) becomes understandable in relation with the whole of the city and the necessity for paying attention to it as a complex & a system also originates from such a view.	**D**
19	Sept. 22, 1993	Competition of Iran Sciences Academic	Questions of the participators in the competition	11, 12	**The meeting had no definite result.** It was agreed that the secretariat set and compiled the questions & responses and offered them in written form to the Ministry of Housing & Urbanization.	**B** c

20	Oct.13, 1993	High-rise buildings	- Presenting the report of preformed researches regard the high buildings - High buildings from economical, social & cultural view - Various views in confrontation with the problem of high buildings - Proper applications for high buildings - Weakness of the urban designs in relation with high buildings problem - Allocating short-term regulations for insuring architectural & urbanization quality in high buildings	16, 17, 21, 61, 77	**The meeting had no definite result.** The Council Members were requested to offer their opinion in relation with the questionnaires of researching studies of high buildings as soon as possible.	**B** C
21	Oct. 27, 1993	High-rise buildings	- Presenting the results of preformed studies in councilor organization in the form of scratch plan and analytic tables - Surveying ecological policies, transportation, balance of density & development - Surveying the connection of land value with high buildings and density in the city	16, 17, 20, 61, 77	**The meeting had no definite result.**	**D** B
22	Nov. 10, 1993	Report on detailed plan of new region of Tehran (west of Kan creek and north of Karaj Highway)	- Physical-Aerial & Mechanical-Geographical Structure of the region - Investment resources & executive ground of the plan - The manner of population structure, motivation-service network	24	**The meeting had no definite result.**	**C** B

23	Nov. 24, 1993	Report on the project "Preparation of the model and Detailed Plan of the Fabric of Abdolazim Shrine"	- The Municipality management & executive unit view - Determining nature of the plan (architecture, descriptive or comprehensive) -The relationship of the plan with the skeleton of Shahr-e-Rey - The basis of this plan vision and the similar plans - Determining the real authority for supporting and deciding	------	**The meeting had no definite result.** But it was emphasized: That the confrontation with old structures and interference in the city matrix structure without any attention to the skeleton and also executive management manner of the plan, is not a proper confrontation.	C B
24	Dec. 8, 1993	Report on detailed plan of new region of Tehran (west of Kan creek and north of Karaj Highway)	- Reasons for placing the plan as the continuous developing factor of Tehran city - The purpose of usage and the necessity for using the region - The subject of increasing structural density & buildings height - Execution manner of the project & its relationship with ownership - The concept of public residing & avoiding single constructions	22	**The meeting had no definite result.** But, it was suggested: the plan councilor regarding the discussions went on the meeting, should extract logical, proper & executive advices and offer them as the plan regulations & rules for execution.	C b
25	Dec. 22, 1993	Organizing industrial units of Tehran (project report)	- Studies stages, industries organizational structure, industrial activity fields, coordination with existing policies - Question stating by the members in connection with: existing obstacles in the studies, connection of this plan with Tehran training plan, paying attention to technology transformations, the place of new jobs in industry	28	**The meeting had no definite result.**	A B

26	Jan. 5, 1994	Status of Tehran's detailed plan	- The relationship of comprehensive plan & descriptive plan - Difference of training plan with Tehran comprehensive plan - The long period allocated for preparing plans - Administrator & addresser of descriptive plans	27	**The meeting had no definite result.**	**A** d
27	Jan. 19, 1994	Status of Tehran's detailed plan	- The obscurities of Tehran Comprehensive Plan - Generalization of programming & designing in all the scales and stages - General difficulties in urban affairs - Description of existing services for urban plans - City divisions into 22 regions, reasons & its explanation	26	**The meeting had no definite result.** It was emphasized: Till we do not revise the frames or do not come to a common point about them, we can not decide at the urban huge scale or can not reach to a clear conclusion.	**A** d
28	Feb. 2, 1994	Organizing industrial units of Tehran (project report)	- Councilor responses to the stated questions in the 25th meeting - stating the effective criterions in surveying the industries (technology & living environment) - Surveying the dependency of industries with each other & their relationship with mother industries - Assessing the effect of lateral industries along the main productions	25	The plan councilor presented some responses to the plan questions. The performed study was offered to the members and it was emphasized on plan execution following.	**B**

29	Feb. 16, 1994	1- Members' survey of Tehran's development plans 2- Review of the Council's past performance and future trends	- The organizations similar to Council in other countries - Similar organizations in other countries - Lack of concluding from the discussions related to policy executing - Establishing specialized committee for the Council	------	**The meeting had no definite result.**	**C**
30	April 27, 1994	Image of the city's future	- Aim allocating - Determining the methods for confronting with the subject	31, 32, 33, 34, 35, 36	Reaching to the systematic confrontation method which is proportional with the scale and the priority allocated to the future problems of Tehran city For continuous alternation of the city, only a clear picture from near future of the city on the basis of the present situation can be achieved.	**A**
31	June 11, 1994	Image of the city's future	- Selecting the confrontation method	30, 32, 33, 34, 35, 36	The members agreed upon taking advantage of analytic method, which illustrates the future picture on the basis of living environmental, cultural space, matrix and management system of the existing condition in time frame.	**A**

32	May 25, 1994	Image of the city's future	- Lack of information & improved plans - The manner of beginning to work - Paying attention to the emergencies in the frame of main purpose - Concluded or predictable fate of the city - Specialized force potential & urban difficulties	30, 31, 33, 34, 35, 36	Lack of information and improved plans make it necessary to start Tehran future picturing on the basis of matrix space data which are based on the specifications of natural environment. Illustrating the city future, we need a common language and coordinate definition.	B C
33	June 22, 1994	Image of the city's future	- The subjects having priority and relationship with urban management in the future picture of the city	30, 31, 32, 34, 35, 36	The priority is allocated to the subjects which are in connection with 4 factors: living environmental, cultural & matrix space and the management system and have relationship with urban management.	C
34	June 29, 1994	Image of the city's future	- Playing a film of the unevenness of Tehran city verge residing in connection with Tehran city future picture	30, 31, 32, 33, 35, 36	**The meeting had no definite result.**	A
35	July 6, 1994	Image of the city's future	- Continuation of the last meeting and the method of subject determining	30, 31, 32, 33, 34, 36	In order to determining the subjects' priority, a specific executing committee was elected among the members so that it can determine the topics in each area.	B
36	July20, 1004	Image of the city's future	Surveying the suggestions of Executive Committee regarding the offered subjects	30, 31, 32, 33, 34, 35	**The meeting had no definite result.**	D
37	Aug. 3, 1994	Javadiieh neighbourhood renovation plan (project report)	- Plan report in the fields of matrix, social, cultural, living environmental, pathology, sociology and economical affairs specifications	38, 39, 40	**The meeting had no definite result.**	C

38	Aug. 17, 1994	Javadiieh neighbourhood renovation plan (project report)	- Continuation of project report by the plan councilor - Questions offering by the members in connection with the manner and specifications of the plan	37, 39, 40	**The meeting had no definite result.**	C
39	Aug. 31, 1994	Javadiieh neighbourhood renovation plan (project report)	- Renovation and reconstruction of old & destroyed structures & areas - Proving the subjective nature of renovation and determining interference scale and the priorities - Studying renovation functions and social-economical results - Strategy & manner of confrontation with old areas and the strategy of designing such materials - Facilities and limitations in confronting with old structures - People partnership in the field of economic & social affairs and policies adaptation in urban management system	37, 38, 40	**The meeting had no definite result.**	**B** C
40	Sept. 14, 1994	Javadiieh neighbourhood renovation plan (project report)	- Renovating & reconstructing of urban old regions and its connection with Javadieh renovation	37, 38, 39	**The meeting had no definite result.** It was advised that: The plan councilor takes advantage of council members for omitting the deficiencies and completion of the plan and presents the result to the Municipality Management for making a discussion.	C D

41	Sept. 28, 1994	Development management or control and direction of development	- Development, management, system concepts and etc. - Alternation & development and interference accepting ability - Management structure of Tehran Municipality - Development management in two sections: government & municipality	51, 63, 66, 67, 68, 86, 88	Following implicit agreement in some concepts, the members of work group were determined to systematize the discussion topic.	B C
42	Oct. 12, 1994	Tehran's environmental capacity	- A report from metropolis and conforming it with Tehran conditions - Fulfilled & under performing plans - Being some of the environments in a critical situation and project priority allocation	44	**The meeting had no definite result.** But, it was emphasized on meetings continuation and inviting living-environment experts to offer their opinions.	A C
43	Oct. 26, 1994	Study of Tehran's surface and underground waters (project report)	- Surveying the councilor plan, description of services & study method - Explaining the plan and presenting members' suggestions & opinions	-----	**The meeting had no definite result.** The emphasis was put on making studies applicable and paying attention to the council members.	D
44	Nov. 9, 1994	Tehran's environmental capacity	- Existing in the middle section of living environment - Effective elements on living environment - The effect of environmental powers on development path - Living environment role in urban space	42, 75	**The meeting had no definite result.** It was emphasized on fulfilling living environmental studies and surveying Tehran ecological power which is one of the tools for development control & guidance.	A b

45	Nov. 23, 1994	Adaptation of the environment for the physically disabled	- Paying attention to handicapped problems as the society necessity - Main topics of adaptation in the city - Visional revising about handicaps - Adaptation activity concentration - Solving the problem in different executive grounds & levels	46	Urban spaces are not proper for handicaps availability and entrance of those who are physical-motional disable and fulfilling such a work needs to revising existing visions in designing urban and architectural spaces. For solving this problem we should go on simultaneously in huge & small scales parallel in two grounds: modifying existing situation and designing new spaces.	A b
46	Dec.7, 1994	Adaptation of the environment for the physically disabled	- Adaptation & constructing beautifully - Adaptation and people active partnership - The necessity for providing executive patterns for city administrating authorities - The necessity of illustrating-incarnating indication for executive methods introducing - Adaptation priorities in the city	45	Proper constructing in the city can be executed through citizens partnership by strengthening utilization traditions from public spaces and in order to control and supervise city arranging, creating independent organizations in urban management is a must.	C d

47	Dec.21, 1994	National identity of Iran architecture & high building construction	- High buildings, world architecture together with urban constructing motivation - Being public and lack of time considering in "architecture national identity" - Lack of ability in indicating architecture national identity in high buildings plan - Lack of connection between national identity and architecture & urbanization district - Illegal habit of the Municipality against urban and architecture development	------	**The meeting had no definite result.** It was advised to offer a work order to the technical & engineering councilor organization in relation with high buildings.	**B**
48	Jan. 4, 1995	Cityscapes and landmarks "Land Mark"	- Definition of city indicator and its place in urban space concepts - Regions, specific structures and urban indicators	------	**The meeting had no definite result.**	**C** d
49	Jan. 25, 1995	Civic centre and city hall	- Surveying operational role of these two complexes in a concentrated and non-concentrated frame on the basis of urban scale - Creating public spaces having natural identity - The difference of Civic Center & City Hall, operational concepts and definition of these two complexes - Social-cultural beds in creating these two complexes in West - The importance of location allocating problem - Symbolization of such these urban centers	50	**The meeting had no definite result.**	**D** c

50	Feb. 1, 1995	1- Application of the Council's discussions 2- Civic centre and city hall	- The manner of offering applicable topics which were discussed in the council - Operational differences of City Hall & Civic Center and their social bed - The example of such these centers in urban history - Urban settlement of these centers and surveying their concentration or dispreading according to the operational situation in the city - Connection of these centers with the urban spaces surrounded them and the necessity of programming	49	It was advised to institute an executive system for creating an applicable council supervisor. **The meeting had no definite result.** But, it was agreed to compile summery of members opinions by the secretariat and present it to the Municipality districts.	**D** **B** c
51	Feb. 15, 1995	Development management or control and direction of development	- Concepts - People partnership as one of the controlling & guiding tools in development - The connection of development leading & control with urban management - Organizing & non-organizing	41, 63, 66, 67, 68, 86, 88	**The meeting had no definite result.**	**B**

52	April 19, 1995	1- Possibility of the formation of traditional housing 2- Strategic planning for the Municipality (Tehran 80)	- Presenting an essay by Mr. Dr. Etesam - Connection manner of plan's past experience and the mentioned program with the council discussions - Notification and connection of Tehran Municipality Senior Management about the Council	------	**The meeting had no definite result.** (This essay was presented in Dec. 1994 (Azar month, 1373, Iranian Calendar) on the day of Tunes Urbanization International Conference.) The specialized council acts as a counseling arm and it should attempt to offer executive aspect to its opinions.	**D** **A** b
53	May 3, 1995	Earthquake "Kobe earthquake in Japan and lessons for Iran"	- Injury sustaining of Tehran city space-matrix organization - practical-applicable plans, regulations & criterions - Constructions control concerning stabilization and emergency equipments - Surveying main factors in destruction of Kobe Earthquake in Japan - Surveying necessary actions for coping with the dangers caused by earthquake	13	It was agreed to compile and publish the mentioned report of "Japan Kobe earthquake & lessons for Iran" by earthquake studies center in the Municipality technical & constructional Deputy and offer it to the related institutes & organizations to be put into utilization.	**B** d
54	June 14, 1995	Tehran's cultural environment (general discussions)	- Urban culture definition and its dimensions - The role of urban management - The role o civil life in body of the city - Definition of city and citizen	------	**The meeting had no definite result.**	**A** b

55	June 28, 1995	Tehran's cultural environment (detailed discussions)	- Tehran city cultural space in the area surrounded by central castle - Central Tehran definition and making clear regarding the applications, location-time identity of the city central plot	------	**The meeting had no definite result.**	**B** c
56	July 26, 1995	Tehran's cultural environment (executive discussions) and city renovation	- Surveying executive topics about renovating the old city - Surveying the effective factors in old space dissipating - Surveying the role of specialization-managing & executive society in urban renovation		**The meeting had no definite result.**	**B** c
57	Aug. 9, 1995	Tehran's cultural environment (green spaces and leisure)	- Green space network and leisure times (together with displaying a film from Paris Disney land and France Miniature - Surveying the effective factors in reorganizing leisure times - Revising in defining public site and utilization of the urban existing spaces - Taking advantage of people partnership in quantitative & qualitative production of cultural space.		**The meeting had no definite result.** It was emphasized that: The urban society has emergence need to organize leisure times and this issue in many cases can be places at the first priority of Tehran Municipality actions.	**A** b

58	Aug. 23, 1995	Tehran's cultural environment (environment)	- Executive definite plans in cultural & ecological spaces - The necessity for determining specific topics for reaching to the applicable plans - Determining plans with executive pattern in three scales of huge, middle and small - Paying attention to cultural vision, public site, space network and urban designing in pattern designs clearance	------	**The meeting had no definite result.** It was advised to put the former stated issues concluding and its presenting to the deputy for Tehran Municipality Technical & Engineering Affairs in the work order.	**B** d
59	Sept. 6, 1995	Tehran's cultural environment (defining specific executive plans)	- Paying attention to Iran society specifications in confrontation with urban spaces - Necessity for revising of scale in urban operations & services - Projects determining & making clear regarding the suggested priorities by the council - Coordination creating in urban management system and prevention from disturbance in deciding - Omission of distance between urbanization plans & urban designing	------	**The meeting had no definite result.** The Municipality on the basis of determined priorities by the Council should define some projects.	**B** d

60	Oct. 4, 1995	Urgencies and their consequences on the city environment	- The reason for occurring the happenings with no program in the city - Discussing about the occurrence reasons of the above-mentioned problems, such as responsibilities of institutes, engineers role, rules & regulations disability and the lack of control system & etc. - Offering some solutions for coping with the problem	61	It was suggested that a specific institute should answer these actions and the qualification of constructing responsible members, amending designing system up to execution, control and execution supervising should be considered seriously.	**A**
61	Oct. 18, 1995	High-rise buildings (City Space)	- Surveying urbanization thoughts, prior to high building constructing - Surveying the establishment of high buildings, sceneries and urban edges - High buildings, the neighboring problems and their location finding - The connection of high building construction, urban space & living environment - Surveying accumulated & dispread settlement patterns of high buildings	16, 17, 20, 21, 77	**The meeting had no definite result.** But, it was advised to reflect the council supervising on the institute which is the provider of high buildings regulations.	**B**

62	Nov. 1, 1995	Profile of the city in the highways	- Planning the importance, necessity & its goals form different aspects - Brief identification of Tehran city highways - Urban sceneries in the highways - Space Designing & proper constructing criterions	-----	**The meeting had no definite result.** But, it was suggested to continue studies till compiling the executive instructions especially for the future highways.	C d
63	Nov. 15, 1995	Development management or control and direction of development	- Displaying a film from developmental plan of Nabi Mosque - Displaying a film from urban development activities in Barcelona - Hearing the report of Mr. Dr. Falamaki from "New Cities International Society" congress in Wean (21st century city) - Urban development, technological transformations & disturbances	41, 51, 66, 67, 68, 86, 88	**The meeting had no definite result.**	**B**
64	Nov. 29, 1995	Tehran's infrastructure network	- Urban foundation network and its components in connection with each other - The difficulties caused by lack of exact knowledge of networks situation in executing urban projects - Non-regarding the roads & streets limitations - Foundation disturbance and its connection with buildings & urban space disturbance - Lack of passing the same scale networks and their mismatch with street allocating	-----	It is necessary to establish a center in Tehran Municipality which must be the coordinator of data & responsible organs in Tehran city and takes advantage of systematic data bank. And finally, such a center should convert the relationships underlay Tehran urban foundations in a legal connections.	**B** d

65	Dec. 13, 1995	Architecture and urban planning for Tehran	- Lack of self confidence in the society and its reflection in lack of statement explicitly in architecture - negating far & near history of the architecture and no knowledge from it - Lack of credit, confidence and co-thinking in professional society	66	**The meeting had no definite result.**	**B**
66	Dec. 27, 1995	1- Architecture and urban planning for Tehran	- Impressing personal tendency in the city caused occurrence an crisis in architecture and urbanization - Lack of deciding possibility of architectures in work fields	65	Only provided that architecture & urbanization profession stated and established in the society and civil life as a specialization & a technique, the specialist considers himself responsible in designing & executing practical plans.	**B** d
		2- Development management or control and direction of development	- Investigating the reasons for existing weakness in today architecture - Different scales of urban development management - Tehran city management in connection with 5 areas & 22 districts - The problem of existing no exact and clear definition from 5 areas - Urban areas programming & designing	41, 51, 63, 67, 68, 86, 88	**The meeting had no definite result.** Urban divisions cause different scales of urban management appear. These divisions should be programmed in different levels.	

67	Jan. 10, 1996	Development management or control and direction of development	- 3 effective factors in urban management: social and local conditions, local power, local politicians and national powers - Existing vacuum between urban programming & executive plans - The connection among huge programming, plan providers & executers	41, 51, 63, 66, 68, 86, 88	**The meeting had no definite result.** The issued which were stated by some of member can be urban programmers' work topic.	**B** d
68	Jan. 24, 1996	Development management or control and direction of development	- The factors effective on urban management formation process & continuation (local conditions, local power, national power) - Land comprehensive plan and its absence - The patterns in all the fields such as residing place	41, 51, 63, 66, 67, 88	**The meeting had no definite result.** The implicit agreements obtained from the last sessions were reconfirmed.	**D** **A**
69	Feb. 7, 1996	Gateways to Tehran	- Tehran city entrances and the problem of its definition - Exact matrix definition of old entrances (gates) - Lack of correct definition of entrances in the present age - City entrance axis and its effect on organization and urban space identity - Urban scenery and complexes in city suburbs and their role in implying the concept of city entrance	71	Tehran city entrances through assessing the concept "gate" is meaningful in three field of 'form', 'activity' & 'space' and this itself is based on the definition of city and its limit concerning living environment & urban management.	**A** d

70	May 1, 1996	Council's agendas and work programmes (1996)	- Space organization of the city and Tehran future program - Architecture, traveling, civilization & future picture of Tehran city -Applicable plans & following the effect of the council supervising on them	-----	**The meeting had no definite result.** It was agreed that the secretariat regarding members' point of views compiles work program of council in the current year.	**B** **A**
71	May 15, 1996	Gateways to Tehran (Designing city square)	- Jahad Square role as one of the main future entrances and its situation in connection with Tehran city highway network - Neighboring urban important elements - Jahad Square as the central square between two population pole (Tehran and the complex of Islamshahr & Shahr-e-Rey)	69	Being equipped to the vision superior than the traffic role for a square and its concept in the city and especially regarding Jahad Square, as one the main entrances of Tehran city, is necessary in designing required entrances.	**D**
72	June 12, 1996	Tehran's skeleton (Project Report)	- Concepts, subject surveying necessity, method of research, the goals - the regulations result from studying traditional experiences and world experiences - Transformation path of the original skeleton of Tehran city and its applications - Limit & specifications of Tehran city skeleton at present - Concepts, methods, and results of the offered work	73	Besides the topic and work method confirmation, it was advised not to be limited to theoretical studies, follow the reflection of these studies on the future detailed designs for the city, offer them applicable role and publish the results of studies in the form of a book.	**A** b

73	June 26, 1996	1- Tehran's skeleton (Project Report) 2- Plan for organizing pedestrians pathways of Tehran (Project Report)	- Answering the questions and the topics of the last session regarding the concepts, methods and results of researching in Tehran city skeleton - Presenting the project report by the plan councilor - Emphasis on applicable studies	72	**The meeting had no definite result.** But, it the emphasis was put on studies continuation. **The meeting has no result;** the council emphasized that: The civil life of the city usually flows in a place where the pavement exists and the happenings design at the scale of the passerby. Therefore, through constructing proper pavements and modifying the driving motion and by calming it, the probability of qualitative confrontation will be provided in urban space.	**B** **B**
74	July 10, 1996	Plan for crust on Resalat highway (Project Report)	Recovery of about 5 hectares of the land which through providing tunnel plan remains on the surface of the ground. - The necessity of urban studies for such a sites, in a way that has logical connection with service spaces in city scale and has the necessary proportion with the requirements of around areas.	-----	**The meeting had no definite result.** Urban designing and programming should be managed in a manner which no part of urban structure remain separate from its body.	**D**

75	July 24, 1996	Tehran's environmental capacity	- Investigating the fulfilled plan by the councilor - The issues related to Tehran living environmental factors – required patterns for compilation and the suggestions in connection with the Municipality	42, 44	**The meeting had no definite result.** Confirmation of the preformed stage of the plan and advising to continue other stages of plan studies.	**A** b
76	Aug. 7, 1996	Study of the environmental capabilities of the lands south of Tehran	- Permanent development in connection with living environmental power - Irregular expansion of Tehran city - Lack of presence of a complete programming & executive system -The population and its effect on nature system and the human constructing area under the name of city - Living Environment from political view	-----	**The meeting had no definite result.** It was suggested : -"the plan of proper constructing of Tehran city south plains" as a design under study should be put in councilor organization work order. - The type of urban management of Tehran metropolitan as a researching topic should be placed in the councilor organization work order.	**B** c

77	Aug. 21, 1996	High-rise buildings (Rules & Regulations)	- High building construction rules and regulations from urbanization, architecture and structure view - License issuance for high buildings - Authority limits of Article 5 commission in making decision about the density - The connection of comprehensive plan and urbanization rules & regulations - Money and capital behavior against the sections fit for investment	16, 17, 20, 21, 61	**The meeting had no definite result.**	**B** d
78	Sept. 4, 1996	Islamic city – safe city	- A review in the statements of the Islamic Republic Leader regarding the Islamic city & Islamic architecture on Aug. 31, 1996, the day he met Tehran Municipality Managers - Main concepts of the Islamic Iran culture & its effects on matrix organization -A new definition of the city, urban management and urban development regarding the basic concepts of Islamic-Iranian city - The city phenomena in the form and the concepts of urban development	------	**The meeting had no definite result.** It was advised: A specific organization and/or management, far from administrative-political stresses, becomes responsible for compiling Iranian-Islamic city concept and also for offering executive regulations.	**A** b

79	Sept. 18, 1996	Study of the environmental capabilities of the valleys north of Tehran	- An introduction to Alborz mountain valleys and living-environmental values of these valleys - Paying attention to mountain specifications adjacent to the city - City development and mountain deterrent factor	-------	The meeting conclusion was offered as the following suggestions: - In order to seek a remedy for north heights & valleys, the coordination of all the related institutes & organizations is required. -All the existing rules & regulations in relation with north mountains & heights of Tehran should be extracted, collected and analyzed. - Creating a unit and coordinated urban management for a more responsible confrontation with the issue of regions located in for of mountain is necessary.	**B** c
80	Oct. 2, 1996	Urban planning in the mountainous range of Darakeh and Hafthowz (Project Report)	- Living environmental spaces - Qualitative values of natural centers - Hinged focuses which connect urban spaces to the mountain natural space - Urban designing system	81	**The meeting had no definite result.** The basic problem is lack of an urban designing (missed ring) among urban plans.	**C** b
81	Oct. 16, 1996	Study for the comprehensive plan of Tehran's amusement and leisure parks (Project Report)	- Leisure definition and its patterns - allocating the place for leisure times - effective factors on operation scale of leisure times space - Parks management and the current rules	80	**The meeting had no definite result.** The studies are academically and have no applicable form.	**C** b

82	Oct. 30, 1996	Comparison of urban planning in Tehran and Istanbul	- Time similarity in providing development plans between Tehran & Istanbul - The tendency toward multi-centralization of Istanbul - Housing construction - Legal obstacles existed in the way of Municipality action - The effect of political transformations in urban programming system	------	**The meeting had no definite result.** It was suggested: A connection will be established between the Councilor Organization & Istanbul Municipality for taking advantage of both experiences (regarding the similarities & oppositions) in the level of expertise.	**A** b
83	No. 13, 1996	Reconciliation of the new buildings with the old texture of Navvab region	- General explanation of the subject - The plan surface & limit (its correct or incorrect selection) - urban development and the factors connected with it in relation with the plan - The issues related to vision manner to the neighboring area of Navab axis - Sound pollutions in connection with the plan limit - The plan assessing issues and considering the effects of Navab Project on the surrounding	84, 93, 94	**The meeting had no definite result.**	**C** b

84	Nov. 27, 1996	Reconciliation of the new buildings with the old texture of Navvab region	- Paying attention to the people partnership role in urban constructions - The necessity of renovating & renewing the surrounding areas - Emphasis on surveying Navab in urban scale and the role of urban management in its development lead & supervision	83, 93, 94	**The meeting had no definite result.** It was suggested that the plan councilor in addition to concern council point of views, offers some suggestions at the following meetings.	**B** c
85	Dec. 11, 1996	A review of the approach to Tehran's old fabric	- A review in fulfilled actions & considerations in old area - Surveying urban main activities concentration on the old structure - The necessity of allocating a single management for proper constructing of the old structure - The complexity of the old structure problem	------	**The meeting had no definite result.**	**C** b
86	Jan. 8, 1997	Development management or control and direction of development	- The necessity of determining management system and supervising the construction - Compiling Article of Association of the structure and supervision on issuance building license - The role of tool makers, architectures, and engineers in alternation the city face	41, 51, 63, 66, 67, 68, 88	**The meeting had no definite result.** It was emphasized that basically the solutions should be searched on the basis of existing facts not the desires.	**B** d

87	Jan. 22, 1997	Parks and their creation in Tehran (Problem Modeling)	- Introducing some examples of park and park constructing in Tehran - Presenting a definition and stating the problem of park and park constructing with determined syllabuses	-----	**The meeting had no definite result.** It was advised: the topic, as a studying project, should be put into work order from different aspects of living environment, green space, leisure time and cultural space.	C b
88	Feb. 5, 1997	Development management or control and direction of development	- Civil society & development - Urban space and development - The effects of "local", "regional", "country" and "national" powers in urban management - The necessity of being flexible in the policies & programs of urban management in taking advantage of tools, means the rules, regulations and ….. plans - The necessity of establishing a committee which studies urbanization rules and then through re-compiling, presents it in the form of a bill.	41, 51, 63, 67, 68, 86	**The meeting had no definite result.** For the first time it was attempt to confront with the topic of Development Lead and Control applicable and systematically.	A b

89	Feb. 19, 1997	A review of the 1996 discussions and preparing the Council's plan for 1997	- Architecture & urbanization specialized library and the fair of architecture & urbanization works - Determining the program topic for each of the members for the purpose of presenting essay and report in the council meetings - Surveying the organization, place and Articles of Association of the Council - Internal management, council members number and composition	------	**The meeting had no definite result.** But, all the member were requested to reflect their opinions & suggestions in all the fields of topics went on in this meeting in written form to the secretariat, so that be concerned in compilation the next council program (the year 1997) and therefore will be declared at the first meeting of the year 1997.	**D**
90	April 9, 1997	The Council's plan for 1997	- Attraction different skills of urban affairs for the council - Administrating method of the council sessions - Presented program by the council secretariat - Council organizational place and supporting it	91, 92	**The meeting had no definite result.**	**D** c
91	April 23, 1997	The Council's plan for 1997	- Permanent growth and development – Space Development - Development Planning & programming system - The necessity of providing urban development plans in various scales - Suggestive program of the Council Secretariat for the work in the year 1997	90, 92	A committee consists of 4 individuals of the members were assigned to compile a program for council work in the year 1997 and offer it to the meeting.	**B** c

92	May 7, 1997	The Council's plan for 1997	- The report of selective committee, program provider for the year 1997 - Urban management system as the council topics addressed	90, 91	**The meeting had no definite result.** It was agreed: the committee continued its work as before and offered its final suggestion to the meeting.	**B**
93	May 21, 1997	Reconciliation of the new buildings with the old texture of Navvab region (Project Report)	- Paying attention to the city old structures including valuable areas or historical ones - Explaining Development Pattern Frame in order to minimize the separation caused by the project execution which is one of the purposes. - The necessity for surveying adjacent area - Navab project: being development pattern or not?	83, 84, 94	**The meeting had no definite result.**	**C** d
94	June 18, 1997	Reconciliation of the new buildings with the old texture of Navvab region (Project Report)	- Work method in the old area and solving the problem in huge scale - Foundation installations deficiency and other lacks - unhealthy area – viewing the plan in short-term & long-term - Urban development pattern Navan Project planning as the Guide Project for pathology	83, 84, 93	**The meeting had no definite result.** The plan councilors were suggested to take action for final revision and necessary amendment concerning council members' opinions.	**B** d

95	July 2, 1997	Plan for renovation of Sangalaj neighbourhood (Project Report)	- Descriptive report from the preformed studies by the councilor - Main symbol of renovation - historical Identity & characteristic of the plan limit - Urban renovation and the definition of civil life renewal -Renovation or Bulldozer urbanization?	------	**The meeting had no definite result.** It was agreed: The plan Councilors paid attention to the council members' suggestions in studies continuation and completion.	C d
96	July 16, 1997	Preparing the Specialized Council's Charter (statement)	- The boundaries of council topics at the future (7 boundaries) - The purpose of charter setting - The council location - Tehran Municipality, Charter addressor and the council statement	------	**The meeting had no definite result.**	C b
97	July 30, 1997	Assumptions for the city's renovation plans	- The city foundation - Urban renovation and proper construction - The experience of urban renovation in Iran - Urban old structure & behaving method with it - Symbols & opinions of urban renovation and its conformity with urban life	98	**The meeting had no definite result.**	B c

98	Aug. 13, 1997	Assumptions for the city's renovation plans	- Common comprehension from the words - Inside & outside of the city - City development from inside - Compounding old & new with the purpose of making the city contemporary - Renovating old structures (city renovation) is not the synonym for elements renovation (buildings)	97	**The meeting had no definite result.** It was suggested: Instead of general topics, it should paid attention to subjective topics and the subjective problems also should be specified and searched in works & projects depth.	**A** b
99	Sept. 1, 1997	Action towards protecting the Council members or members of the professional circles against accidents	- Taking advantage of the deep culture of cooperation in the society and social models - Expanding such a stimulus in current and continuous difficulties of other authorities of engineering profession - Making guild society legal and supporting it - Making the subject of help and cooperation fundamentally	------	It was agreed that parallel to subjective action (specific) regarding the existed problem, a committee consists of 4 individuals of the members, after surveying, offer the executive suggestions to the meeting.	**D**

Table 2: Discussed Issues in The Session of TSC

No.	Subject	Sessions	No. of Sessions	Result
1	Cooperation of experts in city affairs and executive managers	1,2,3,4,5	5	-
2	Revival of historic and valuable fabrics of the city	6,7,8,9,10,12,13	7	-
3	Iranian Scientific Academy, architectural competition	11,12,13	3	-
4	Plan for Tehran's earthquake zone	13,53	2	+
5	Discrepancies between plans and executions	14,15	2	-
6	High-rise buildings	16,17,20,21,61,77	6	-
7	Abbasabad and prayer ground of Tehran	18	1	+
8	Report on detailed plan of new region of Tehran (west of Kan creek and north of Karaj Highway)	22,24	2	-
9	Report on the project "Preparation of the model and Detailed Plan of the Fabric of Abdolazim Shrine"	23	1	-
10	Organizing industrial units of Tehran	25,28	2	+
11	Status of Tehran's detailed plan	26,27	2	-
12	Members' survey of Tehran's development plans	29	1	-
13	Review of the Council's past performance and future trends	29	1	-
14	Image of the city's future	30,31,32,33,34,35,36	7	-
15	Javadiieh neighbourhood renovation plan	37,38,39,40	4	-
16	Development management or control and direction of development	41,51,66,68,63,86,88,67	8	-
17	Tehran's environmental capacity	42,44,75	3	-
18	Study of Tehran's surface and underground waters	43	1	-
19	Adaptation of the environment for the physically disabled	45,46	2	+
20	Cityscapes and landmarks	48	1	-
21	Civic centre and city hall	49,50	2	-
22	Application of the Council's discussions	50	1	+
23	Possibility of the formation of traditional housing	52	1	-
24	Strategic planning for the Municipality (Tehran 80)	52	1	+
25	Tehran's cultural environment (general discussions)	54	1	-
26	Tehran's cultural environment (detailed discussions)	55	1	-
27	Tehran's cultural environment (executive discussions) and city renovation	56	1	-
28	Tehran's cultural environment (green spaces and leisure)	57	1	-
29	Tehran's cultural environment (environment)	58	1	-
30	Tehran's cultural environment (defining specific executive	59	1	-

	plans)			
31	Urgencies and their consequences on the city environment	60	1	+
32	Profile of the city in the highways	62	1	-
33	Tehran's infrastructure network	64	1	+
34	Architecture and urban planning for Tehran	65,66	2	+
35	Gateways to Tehran	69,71	2	+
36	Jihad Square plan	71	1	+
37	Council's agendas and work programmes (1996)	70	1	-
38	Tehran's skeleton	72,73	2	+
39	Plan for organizing pedestrians pathways of Tehran	73	1	-
40	Plan for crust on Resalat highway	74	1	-
41	Study of the environmental capabilities of the lands south of Tehran	76	1	-
42	Islamic city – safe city	78	1	-
43	Study of the environmental capabilities of the valleys north of Tehran	79	1	+
44	Urban planning in the mountainous range of Darakeh and Hafthowz	80	1	-
45	Study for the comprehensive plan of Tehran's amusement and leisure parks	81	1	-
46	Comparison of urban planning in Tehran and Istanbul	82	1	-
47	Reconciliation of the new buildings with the old texture of Navvab region	83,84,93,94	4	-
48	A review of the approach to Tehran's old fabric	85	1	-
49	Parks and their creation in Tehran	87	1	-
50	A review of the 1996 discussions and preparing the Council's plan for 1997	89	1	-
51	The Council's plan for 1997	90,91,92	3	-
52	Plan for renovation of Sangalaj neighbourhood	95	1	-
53	Preparing the Specialized Council's Charter	96	1	-
54	Assumptions for the city's renovation plans	97,98	2	-
55	Action towards protecting the Council members or members of the professional circles against accidents	99	1	-

Table 3 Discussed Issues in Classified Realms

Table 3.1 Phisycal Realm

No	Subject	No of Session	Result	A	a	B	b	C	c	D	d
1	Revival of historic and valuable fabrics of the city	7	-			3	1	4	3		3
2	Competition of Iranian Scientific Academy	3	-							3	
3	High-rise buildings	6	-			4	1			2	1
4	Abbassabad and prayer ground of Tehran	1	+					1			1
5	Report on detailed plan of new region of Tehran (west of Kan Creek, north of Karaj Highway)	2	-				2	2			
6	Report on the project "Preparation of the model and Detailed Plan of the Fabric of Abdolazim Shrine"	1	-				1	1			
7	Javadiieh neighbourhood renovation plan	4	-			1		3	1		1
8	Adapting conditions for the disabled	2	+	1			1	1			1
9	National identity of Iranian architecture and construction of high-rise buildings	1	-			1					
10	Cityscapes and landmarks	1	-					1			1
11	Formation of traditional housing	1	-							1	
12	Profile of the city in the highways	1	-					1			1
13	Infrastructure network of Tehran	1	+			1					1
14	Gateways to Tehran (Jahad Square)	2	+	1						1	1
15	Skeleton of Tehran	2	+	1		1	1				
16	Plan for organizing pedestrians pathways of Tehran	1	-			1					
17	Plan for the surface of Ressalat Highway	1	-							1	
18	Article titled "Comparison, Differences and Similarities of Tehran and Istanbul	1	-	1			1				
19	Reconciliation of Navvab new buildings with neighbouring fabric	4	-			2	1	2			2
20	An approach to Tehran's old fabric	1	-				1	1			
21	Plan for renovation of Sangalaj neighbourhood	1	-				1				1
22	Assumptions for renovation of the city	2	-	1		1	1		1		
Total		**46**	**5**	**5**	**-**	**15**	**11**	**18**	**7**	**8**	**14**

M= 5:22 = 23% of subjects led to specific results

N= 8:46 = 17% of sessions reached specific results

Table 3 Discussed Issues in Classified Realms

Table 3.2 Ecological Realm

No	Subject	No Of Session	Result	A	A	B	b	C	c	D	d
1	Plan for Tehran's diamond-shaped areas	2	+	1		1	1				1
2	Tehran's environmental conditions	3	-	3			2		1		
3	Study of surface and ground water resources	1	-							1	
4	Environmental conditions of planes south of Tehran	1	-			1			1		
5	Environmental conditions in the valleys north of Tehran	1	+			1			1		
6	City plans for the mountainous areas of Darakeh and Hafthowz	1	-				1	1			
7	Comprehensive plan for Tehran's promenades	1	-				1	1			
8	Parks and park building in Tehran	1	-				1	1			
Total		11	2	4	-	3	6	3	3	1	1

M= 2:8= 25% of subjects led to specific results

N= 3:11= 27% of sessions reached specific results

Table 3 Discussed Issues in Classified Realms

Table 3.3 Management Realm

No	Subject	No of Session	Result	A	a	B	B	C	c	D	d
1	Deviations in execution from plans	2	-			1				1	1
2	Organizing industrial units of Tehran	2	+	1		1	1				
3	Tehran's detailed plan	2	-	2							2
4	Management of the development of Tehran or control and guidance system	8	-	2		6	1		1		3
5	Civic center and city hall	2	-			1			2	1	
6	Strategic plan for Tehran Municipality	1	+	1			1				
7	Emergency cases and their effects in Tehran and identification of accidents	1	+	1							
Total		18	3	7	-	9	3	-	3	2	6

M= 3:7=42% of subjects led to specific results

N=4:18=22% of sessions reached specific results

Table 3 Discussed Issues in Classified Realms

Table 3.4 Social - Cultural Realm

No	Subject	No of Session	Result	A	a	B	b	C	c	D	d
1	Cultural atmosphere of Tehran (general discussions)	1	-	1			1				
2	Cultural atmosphere of Tehran (discussions about execution and renovation of the old city)	1	-			1			1		
3	Cultural atmosphere of Tehran (environment)	1	-			1					1
4	Cultural atmosphere of Tehran (green space and leisure)	1		1			1				
5	Cultural atmosphere of Tehran (detailed discussions)	1	-			1			1		
6	Cultural atmosphere of Tehran (definitions of specific executive plans)	1	-			1					1
7	Architecture and city planning of Tehran	2	+			2					1
8	Islamic city-safe city	1	-	1			1				
Total		**9**	**1**	**3**	**-**	**6**	**3**	**-**	**2**	**-**	**3**

M=1:8=12.5% of subjects led to specific results

N=2:9=22% of sessions reached specific results

Table 3 Discussed Issues in Classified Realms

Table 3.5 The Internal Issues of The Council and General approches of the members

No	Subject	No of Session	Result	A	a	B	b	C	c	D	d
1	Cooperation of experts in city affairs and executive managers	5	-	1		2	1	1	4	1	
2	Review by members of Tehran's development projects	1	-					1			
3	Review of Council's performance in the preceding 28 sessions and its future trend of activity	1	-					1			
4	Image of Tehran's future	7	-	3		2		2	1		
5	Application of subjects discussed by Council	1	+							1	
6	Council's duties and agendas for 1996	1	-	1							
7	Review of actions and discussions of 1996 and preparing work program for 1997	1	-							1	
8	Council's plans for 1997	3	-			2			2	1	
9	Preparation of the Council's charter	1	-				1	1			
10		1	-							1	
Total		**22**	**1**	**5**	**-**	**6**	**2**	**6**	**7**	**5**	**-**

M=1:10=10% of subjects led to specific results

N=1:22=4.5% of sessions reached specific results

Table No.4 Conclusion

				A		*B*		*C*		*D*		Ratio	%
No	Subject	No of Agendas	No of Sessions	A	a	B	b	C	c	D	d	M	N
1	City's physical environment	22	46	5	0	15	11	81	7	8	14	23	17
2	City's ecological environment	8	11	4	0	3	6	3	3	1	1	25	27
3	City's management environment	7	18	7	0	9	3	0	3	2	6	42	22
4	City's cultural environment	8	9	3	0	6	3	0	2	0	3	12.5	22
5	The Council on the Council	10	22	5	0	6	2	6	7	5	0	10	4.5
Total		**55**	**106**	**24**	**0**	**39**	**25**	**27**	**22**	**16**	**25**	**22**	**14**
				48		**103**		**76**		**57**			

APPENDIX IV

Practical Results of Research on Urban Structural Framework of the City of Tehran

The Application of a New Approach to Urban Problems
A Research on the Urban Structural Framwork of the City of Tehran

In the years 1991-94, those involved in city affairs felt that there was a need for a practical cognition of the totality and reality of the city. So, the idea of a research work emerged from the discussions among the experts in the "Tehran Engineering & Technical Consultation Organization(TETCO)". Ms Hamidi, M Sc, was given the task of maintaining and developing the team that was to deal with the matter.

The core of the team was made up of three people: Ms Hamidi, researcher and head of the project, Dr Seyyed Mohsen Habibi and Javad Salimi, M Sc. From time to time another expert or other experts would join the team in one or a number of sessions as necessary (eg Mr Sabri, M Sc).

In March 1999, the findings of the team, the results of three years of study and discussion, were printed in Persian, in tree volumes under the title of "Cognition of the Urban Structural Framwork of the City of Tehran".

Before the book was issued, a paper giving the summary findings of the team was presented to the "2nd Congress on History of Iranian Architecture & Urbanism" which was held in the Bam Citadel on 14-18 April 1999.

The paper was accepted by the academic board of the Congress and was delivered by myself on the second day of the Congress. It was also published on pages 159-170 of Volume 1 of the collection of the papers presented at the Congress. The book was edited by Mr Bagher Ayatollahzadeh Shirazi and published by the Cultural Heritage Organization. A free translation of the paper follows.

Introduction

The findings of the research on the city Urban Structural Framwork lead to a systematic approach which considers the city as a complicated and ever changing system.

This approach deals with the city as a living and purposeful phenomenon. Four factors have been identified as the keys to the systematic cognition of the basis of the city of Tehran.

- Physical form
- Land uses
- Access and traffic, and
- Landscape and landmarks.

These factors have certain features which help the comprehension of the Urban Structural Framwork of the city.

The present research was based on the keys provided by a thorough study of traditional Iranian architecture and on worldwide experiences. The idea was not to develop a unique plan for towns but rather to find a way of reconciling spatial planning with social, cultural and economic characteristics. It also attempts to properly combine qualitative and quantitative methods. According to this approach, the city is considered to be essentially the outcome of human activities and movements. Thus the city achieves its coherence through a proper and revised assumption of public spaces. Civil life finds its meaning in the framework of economic, social and cultural features and in turn defines the important role of the Urban Structural Framwork .

This research is based on three considerations:

- The history of the city and its Urban Structural Framwork (characteristics of the access network, and functional, visual and physical aspects)
- The present state of the city and its Urban Structural Framwork (both at macro and micro levels), and

- The trend of the future growth of the city and its Urban Structural Framwork.

The present research reviews and analyses the potentials and shortcomings of the city and its Urban Structural Framwork from different points of view, taking into account the civil life of the city.

City Urban Structural Framwork : the Scene of City Life

The city Urban Structural Framwork is a combination of its functions and elements. In old cities the Urban Structural Framwork was defined by the pedestrian movements within the city and the relation of such movements with city functions. In ancient cities the rich and the poor, the trader and the artisan, lived and worked side by side.

In the Renaissance, modern urban planning was introduced and city development was put under the control of experts. In order that city managers might properly plan a city's proper future growth, they must have a clear picture of the city. Only then can they lay out a reasonable and fair system for a balanced distribution of city functions, and a sensible physical and spatial plan. Therefore, a good cognition of the city, knowledge of its potentials and physical characteristics (area, spatial structure, texture…), would be essential for the urban planning of any city.

An understanding of a city's system and its Urban Structural Framwork throughout the ages, gives a picture of its future which in turn plays a vital role in organizing the city's developmental activities.

A city's Urban Structural Framwork , which takes shape through a gradual process over many long years, is a dynamic process and plays a key role in the city's future growth. Cognition of the Urban Structural Framwork and its characteristics allows the planners to draw up a flexible, dynamic and purposeful plan, and avoids intermittent, haphazard approaches and their adverse consequences.

The overall picture of the city is essentially formed by economic, social and cultural characteristics as well as the civil life that goes on within it, its history, its major elements and regions, the infrastructure networks, the main traffic routes, and the main centres of activity.

Research on Tehran's Urban Structural Framwork – the City's Needs

In Tehran metropolis, the speed of growth and change is dazzling. So, it needs a flexible and dynamic system of control and guidance to govern its growth in order that city functions, services and public spaces may be adequately and easily put at the disposal of the inhabitants.

Today's Tehran must act as a cohesive body with a consolidated Urban Structural Framwork , if it is to fairly and properly distribute services, job opportunities, the labour market and capital, across its vast domain.

As the capital of a large country, which has an ancient civilization, Tehran must present to its inhabitants, as indeed to the world at large, its national and indigenous identity. Tehran is a living body with a well-defined Urban Structural Framwork . Tehran's Urban Structural Framwork comprises of its economic, social, and physical infrastructures. As in case of every living creature, the Urban Structural Framwork is the centerpiece of city life and activity, the structure that holds the entire body together, sustains its weight, and allows movement through the joints. The city must have a self-regulating system, within it, that rectifies any disorders or disorganization in itself.

The rapid growth of Tehran during the 1960s brought about a sudden transformation in its general texture and Urban Structural Framwork . It turned Tehran, from a town with a single centre and a very homogenous Urban Structural Framwork , into a metropolis that had several centres and city regions surrounding them. To understand such a phenomenon, one had to identify the city's nuclei and the relationships that existed between the city and the urban region, or cluster of towns.

To achieve this, it was necessary to combine the concept of the Urban Structural Framwork with the meaning of civil life. In this way one could find certain strategies that might lead to an improved city life, better services, and more comfortable residential quarters, at various scales. So, the current argument among the authorities and decision-makers concerned the lack of an all-embracing plan that was based on this viewpoint.

The first Comprehensive Plan was drawn up in 1969 as a basic plan that did not take into consideration such issues as the local city planning culture, the indigenous spatial design potentials and the rich civil life of the people. The second or New Comprehensive Plan was prepared in 1988 and was ratified in 1992. This Plan, too, was inadequate as it did not have the capability to deal with the current city crises. Therefore, the city management felt that it had to carry out fundamental research towards finding a proper strategy. These studies were begun in 1993.

Distribution of Space and Services within the Urban Structural Framwork.

The Urban Structural Framwork is made up of movements and activities of the entire city. It can also be defined as the sum of all the gatherings and movements within the city. In the studies carried out with respect to the city of Tehran, such features as city functions (land uses), physical structure, access ways and visual aspects have been considered in order to identify the centres of convergence and activity. Civil life deals with the quality and the factors that are effective in the gatherings and activities. Civil participation has a fundamental meaning insofar as it attempts to receive the views of the people and make proper use of the findings. Gathering the peoples' views is one of the fundamentals of civil society. Therefore, the establishment of effective relations with the various city councils and exchange of views can be largely helpful in finding solutions to the problems the city faces.

Those elements that have identity and are correlated can help us gain a comprehensive view of the city. The Urban Structural Framwork is a system in

which the elements are variable but the relations are fixed and preserve their meanings with respect to the system as a whole. This principle is very valuable in the revival of valuable and historic texture of a city, a very important aspect of the Urban Structural Framwork. This unique and complex system must have a wholeness that is understandable for the citizens. The city image belongs to all its inhabitants and expert views are also based on the same principle. So the Urban Structural Framwork can be understood through the system of city movements. One can trace the nodes of these movements and organize them. A three dimensional design of the city is the beginning of the emergence of the Urban Structural Framwork . A feeling of security and place are key factors in the creation of "lively" city life. When a new image of the city is needed, the citizens feel there is homogeneity and solidarity among them. The city must be a collection of social and cultural features/characteristics providing a desirable atmosphere for meetings, work and leisure. Furthermore, it must encourage the citizens of all ages and social strata, to move about on foot and to communicate personally.

In any city there must be proper places for discussions, trade, and religious and cultural gatherings, so that people can meet face to face and so give rise to a rich civil life. A city is a collection of relations and memories throughout various ages and it is the quality of this collection that keeps the city and its experiences alive. What makes the people want to leave their homes and join the others in public places is another issue related to social culture and the diversity of the attractions of city life that can greatly help the revival of civil life and the physical organization of the city.

The Citizens' Understanding of the City – City Landmarks

The physical elements of a city fall into two categories:

1- Artificial (outstanding buildings, access ways network, main roads, open spaces, parks…)

2- Natural (mountains, hills, coasts, forests…)

City landmarks are related to these elements which make the city legible.

A part of the studies carried out on the Urban Structural Framwork are aimed at improving the spatial quality of the city. It reveals the organization and arrangement of the city landmarks and the city's image. The functional, visual, physical and access features/characteristics reveal the Urban Structural Framwork . They also form the basis of the city's organization and the organization of the city symbols plays a very decisive role in the formation of the image of the city. It can be used in the process of organizing the city's visual elements so that the city becomes more understandable to the citizens.

A person's range of physical and social movement within a city is limited by his knowledge and understanding of his environment. The monuments and memorials which are physically different and which are landmarks for the people, play an important role in creating a feeling of belonging on the part of the citizens and in their understanding of the environment. The city's major elements, at any time in its history, are symbols of the social, economic, cultural and political conditions of the time. Through the identification of these elements and the city's visual potentials, one can propose a plan for organizing the network.

The continuation and correlation among the main visual elements and landmarks will consolidate their effectiveness and importance. The reciprocal effects of the landmarks on one another will register their image on the minds of the viewers. The collection of these city symbols creates a proper identity for the city. The structure of the Urban Structural Framwork will only be desirable when its identity and legibility are firmly united.

The structure and organization of the Urban Structural Framwork , the main roads and squares, and the structural values of the neighbourhoods, play key roles in the civil life of the city because the main city elements that have historic, functional, visual and physical elements can give the city meaning if redefined. They can also create memories, which is a sign of the continuation of life.

The enhancement of the spatial quality from the point of view of direction and location plays a significant role in the development of social activities and cultural exchanges. The landmarks reflect the city's culture which includes the city's history of architecture and town planning. They bring the generations together and give rise to a common understanding of space.

The citizens know their city from its public spaces of which the Urban Structural Framwork is a part. A clear cognition of the Urban Structural Framwork requires that stronger relations should exist between the people and public spaces. And this would only be possible through visual values and landmarks which are the results of attention paid to city functions and the historically valuable physical body of the city.

Suitable and convenient access ways enhance movements of the people, so important to a rich civil life. Therefore, one could say that landmarks are closely related to the access ways and play a key role in the gatherings of the citizens. An easy cognition of the city is given a great deal of importance in today's town planning. It is for this reason that preparing maps that people can easily read and understand has become so important and hence the numerous questionnaires, interviews and polls which try to understand what is better for the people. The organization of the city's cultural Urban Structural Framwork is also based on a rich visual structure and the people's understanding of the city. The cultural Urban Structural Framwork can be enhanced through:

- The creation and consolidation of the city's identity (through linking the Urban Structural Framwork to the hidden values such as its cultural heritage and landmarks)
- The creation, among the citizens, of a feeling of belonging (through their proper cognition of the natural environment and their participation in city affairs and decision-makings).

Applications of Research on Urban Structural Framwork of Tehran City

A cognition of the Urban Structural Framwork of the city of Tehran and an analysis of the findings leads to the identification of the limitations of the Urban Structural Framwork . Analyses and evaluations have been carried out in all areas that can provide a picture of the Urban Structural Framwork . The evaluations are based on certain criteria that were derived from basic studies (theoretical principles and legal aspects observed in sample cities). The cognition of the cultural, social and economic characteristics confirms the importance of civil life in collective activities, which exist in the major public spaces within the Urban Structural Framwork . The Urban Structural Framwork can be defined in terms of city division hierarchy, the hierarchy of the networks and the composition of the spaces. The infrastructure networks make up one of the main spatial elements of the physical body of the city which may be organized through a proper definition of the Urban Structural Framwork .

Attention paid to the Urban Structural Framwork of the city has been greatly helpful in the model prepared for organizing the city and making it suitable for the disabled.

The studies carried out with respect to the features of the Urban Structural Framwork make possible the process of organizing the city and giving it identity. Identification of the collections of physical features and of activities, consolidating them and making them cohesive, and regulating and harmonizing them, will give identity to parts of the city. These collections, which are connected through the city's arteries of similar scale, make possible a continuous cognition of the city Urban Structural Framwork . Such concentrations in the four parts of the city – north, east, south and west – give meaning to the city's potentials for becoming organized. This view extends to the various city divisions from the city itself down to neighbourhoods, and also covers city districts. This view was applied to the plan for reorganizing the area of Zargandeh, at the neighbourhood level, and in the plan for the development of the Urban Structural Framwork of Shahr Rey, at the district level.

The city landmarks, which are the links between the city's history with today's symbols gain importance with regard to their location in the city and position on the access ways network. They help determine the right position of new landmarks within an organized network, which is itself representative of continuous values of civil life.

The Urban Structural Framwork plays a significant role in offering an image of the city and in providing the grounds for the city's growth on the basis of the natural potentials. This type of organization or revival leads to the growth of the city from within. The establishment of relations among the city's elements within the Urban Structural Framwork revives their functions. The Urban Structural Framwork is formed by the strong historic roots and social values and therefore the city's growth in relation to the Urban Structural Framwork becomes possible. This way of organizing or reviving the city awakens activity in the hidden and dormant parts, which are still alive, and protects the city's cultural and functional aspects.

To identify those city centres that emerge as the Urban Structural Framwork grows one must resort to the city division hierarchy. This view was applied in the comprehensive plan for collection and recycling of waste materials under the title "Physical Classification of the Greater Tehran".

The physical structure of the Urban Structural Framwork of the city of Tehran has a tremendously active centre which coincides with the centre of the old city. Th main axes of the growth of the Urban Structural Framwork extend radially from this centre along the main roads and streets. At the origin these growth axes are continuous but as one moves further away along these axes one finds that they become more and more intermittent. Ultimately the growth centres become dispersed, scattered remotely - and independently as far as city life is concerned – but linked through certain joints.

In the final analysis the city of Tehran is a "constellation" of towns at the urban-region scale, all parts of which are reciprocally related.

Thus, the civil life system of Tehran and its Urban Structural Framwork must be defined on the basis of the combination and segregation of movements, the various centres, and human activity in the two sectors of the city: where life is easy and quiet; and where there is a great deal of action with a high speed and high level of energy. These are the bases of the city's organization and of its Urban Structural Framwork .

APPENDIX V

A Safe City

A Safe City

"A Safe City" is the title of a speech that I delivered in the Research Council of the Red Crescent on 10th July 2000. The speech was followed by a series of discussions in which the audience posed questions and I attempted to provide relevant answers. What follows is a summary of that speech translated from Persian into English. Slides and notes are also provided.

I have included this text as an annex to my thesis to indicate the transformations that have evolved in my mode of thinking and outlook.

Introduction

The Council for Planning has given me this opportunity – considering my field of study and empirical experience – to contribute in this meeting by presenting this paper under the general title of "Role of Urban Planning in Reducing the Consequences of Natural Disasters".

The ladies and gentlemen attending this meeting are all highly qualified in various specialized fields outside the area of architecture, urbanism and urban planning. So, I shall endeavour to direct my speech in such a way as to enrich the inter-disciplinary cooperation and would lay bedrock for the formation of a common domain for further discussion here.

During the three weeks' period of time allowed for preparing this paper, I gave a great deal of thought to the title that had been set: What can and should urban planning do to reduce the adverse – sometimes tragic – effects of natural disasters? What kind of a city must be constructed? What are the qualifications and the characteristics of a safe city?

In the end I decided to define and clarify the meaning of the safe city and by this I shall try that to make the story short and make the issue clearer. Therefore, I would

begin with my understanding of a number of terms that I believe are related to the issue.

Definitions:

1. In my opinion, if we consider architecture to be the design and organization of the physical aspects of a certain place with the aim of fulfilling the needs of the performance of certain specific functions at a particular given time, then urban planning must be taken to mean the design and organization of a certain complex (city) for the purpose of suitable space for specified aims and functions in a particular setting (country).

2. The Persian word khaneh means both house and home. It will greatly help if we consider the two meanings separately and with some thoughts. There are two concepts at play here. First, we have the physical space where the various functions are performed. Second, we face the life that goes on within that space. We can apply the same concept to cities: if house is replaced with city then civic life may be the equivalent of home.

3. What do we mean by *safety*? Do we mean the safety of a structure, the physical body of the city, or the safety of the home or the civic life, or perhaps both? The first safety issue that comes to mind is the physical and physiological safety of the inhabitants who must be protected against accidents and natural disasters. This is to some extent reasonable and acceptable particularly in the eyes of those who are directly responsible for people's physical safety and health, such as physicians, fire fighters, lifeguards etc). But should it be the same in the eyes of an architect or an urban planner? Naturally, as a human being an architect and an urban planner would both be seriously concerned with the first issue, but cannot solely confine him/herself to this aspect of safety. On the other hand

Safe Environment

When we are concerned with the safety of an environment, we must deal with two aspects of safety:

a) The physical aspect (house or city), which has a certain identity, defined by the physical structure and organization, and the result of interactions between the subsystems within it (structure, air-conditioning system, electrical system, water distribution system etc). Each of these subsystem in turn is sum total of a number of subsystems of its own. Obviously the whole system is stable so long as the subsystems are stable, ie the structure, installations etc are stable. Furthermore, the stability and balance of the relations between the systems or subsystems, at each and every level are vital for the stability of the total system.

b) What has been said about the close relation between the physical space and the realm of social life leads to this fact that the value of the stability and the safety of a building or a physical pace is associated with the opportunities that this building or space provides for certain behaviours in the life of the human being. Without this collective social life the stability and safety of any premises and physical space, there would be no meaning and value of such. This social life occurring inside this space requires safety and security, which is in turn related to the provision of the security of the life, whether private or public, of the members of the systems inside it. To have a proper home we must have the house (the rooms, a kitchen, bathroom…) and people living in the house and making proper use of its various parts and amenities, in a civilized manner, a sort of civic life. Thus, we have a *house* and a *home*, in both of which the subsystems operate and interact in harmony and balance. By the same token a school's safety and stability, for example, depends on those of its classes, services, labs etc.

Safe City

A city is a territorial phenomenon that is the sumtotal and the result of natural and climatic conditions, the inhabitants' culture and way of life, the natural and man-made environments etc. In other words it is surrounded and affected by its environment and all its aspects including the nature of the environment which in turn includes possible natural disasters (earthquake, floods, lightning, typhoons, epidemics, volcanic eruptions etc) and man-made or man-caused disasters (wars, conflicts, corruption, fires, social and economic crises, air, visual and noise pollutions, which threaten the cities and citizens. In fact disasters caused by mankind are far more frequent and dangerous than natural disasters, with the difference that disasters caused by human beings take longer to emerge and are not very obvious. Indeed, they are often the outcomes of urbanism, in other words here we have the city fighting against itself.

At this stage many questions arise. For whom do we seek a safe city? What is the reason for this safety? Who and what are these safety measures taken for? When should these measures be taken? Is this safety for the city or for the citizens? (This in turn requires a definition of the terms "citizen" and "city").

In this paper I confine myself to natural disasters and calamities. To face such calamities we must prepare the city and its parts (the system and subsystems) to withstand the effects. From the physical aspect, the city and its parts must be built in such a way as to resist and survive natural disasters. The buildings, roads, bridges, infrastructure facilities etc must be adequately strong and well-built, not only to withstand the disaster but to ensure that the functional organization of the city is not seriously affected.

A city can survive disasters (natural as well as man-caused disasters) providing it would be able to resist them physically as well as socially, in other words the physical and living aspects, life and the physical environment should be strong enough to be resistant to any kinds of potential dangers. This would include all the houses, public buildings, highways, bridges, installations... as well as various domains of social life like homes, localities, markets, schools, cultural centres, different associations...

But if the parts react to a calamity individually and without co-ordination and unison with other parts (subsystem reacting independently in the super-system) this will result in the loss of identity of the city. There will be a city but no citizen nor urbanism and civic life in the true sense. The picture of a city after the explosion of a nitrogen bomb, no less disastrous an occurrence than that of the atomic bomb, is extremely sad: a city without inhabitants.

If a city is to resist and withstand disasters and protect the inhabitants against them the organization of the public spaces in various parts that make up the city (neighbourhood, district, precinct, town metropolitan ...) the absence of a systematic organization and relations among the public spaces and of proper hierarchy of functions will result in a total disruption of city life and urbanism.

Sustained growth and development of a city must contain within it a means of resisting and fending off adverse incidents, difficulties, and disasters. It must also be equipped to repair, reconstruct, confront and ward off disease, bring about improvements where needed, cure, amend, evolve ... These are not remedies that one can bring to a city like a medical injection. As a living body, the city must possess these abilities within it as a part of its body and life system, through participation and cooperation of its parts, its subsystems. They must exist as a part of collective life.

No professional physician or a medical practitioner can ever claim that he or she has actually *cured* a disease. What they can do is to eradicate the conditions that impede recovery of the life system of the patient, but the patients system must be capable of fighting off the malady.

Conclusion

1. As pointed out in the discussion on *house* and *home*, urban planning is bound to fail if it does not incorporate the civil life of the entire city, and, equally, those of its parts (neighbourhoods, districts etc), and the developments likely to occur in civic life, as lived by its own citizens. Copying other cities which are bound to have different cultures and environments is bound to fail. This is

to say architecture and urban planning are local affairs and must be based on local living and environmental condition.

2. Civic life, at all scales, is constantly developing and changing. Therefore the planning and design of urban spaces must take into consideration civic life as actually found in the environment under consideration. It cannot be entrusted to an architect or an urban planner sitting in an office a thousand miles away, remote and quite unfamiliar with the actual living and environmental conditions, working on the basis of second-hand information.

3. A living environment cannot be made safe unless proper measures are taken at the initial stages of its planning idea, designs and temporal-spatial planning.

4. Urban planning is a process that must flow parallel to civic life and be in proportion to its scale. So, it must conform to the scale of urban management and that of the people involved in preparing the grounds for decision making (advisors/consultants) and those who make decisions.

5. For every action there is a perquisite positions and precondition, which in turn determines the subject of actions according to the approaches, attitudes, opinions...Hence these are the necessary parameters for understanding a subject and its potential scale.

Therefore, it appears that in building towns and in urban planning certain steps have to be taken right at the beginning: becoming aware of the situation and the subject, realising the scale, inclusion of designer(s) within the body of consultants/advisors/experts, and finally approaching urban planning as a part of civic life, not an activity remote from city and the civic system.

Application

Obviously this series of speeches being delivered in this meeting of the Research Council, and the numerous meetings held by it as well as expertise and consultancy

services at its disposal, are all aimed at finding interdisciplinary solutions to be used by the Red Crescent Association of the Islamic Republic of Iran.

Hoping that I have been able to clearly express my views on the subject and my approach towards findings suitable solutions, I feel it my duty as an executive, to put forward a number of questions which must be posed and answered before any action is taken in any area including any involvement in urban planning.

A- Position

1. The Iranian Red Crescent is considered to be a non-government organization, but is it truly an NGO?

2. Where does the Red Crescent stand relative to the various cities and towns of the country, other areas of the entire country, what is its true position?

3. What does the Red Crescent, in the position of an agent, know about its own position and its relations, at various levels, and its interactional domain in districts and provinces, the entire country, the region and the world?

4. What are the political, economic, social and cultural relations, dependencies of the Red Crescent?

5. Where does it stand in relation to the state and the people?

There are various other similar questions that may be posed with regards to the position(s) of the Red Crescent in relation with the circles to which it considers itself to be related to and dependent on.

B- Subject Matter

1. What is the actual "subject" of the activities of the Red Crescent Association? Is it solely foreseeing, prevention, reducing the potential consequences of disasters, confronting disasters, rehabilitation or all of these measures?

2. What is the "domain" of the activities of the Association? Is it concerned with only natural calamities or crises, or environmental, social, political, and health issues as well?

3. Is Red Crescent supposed to – or rather authorized to – act in an ongoing continuous process or are, its responsibilities and activities confined to times of crises/disasters only?

4. Who is to identify and judge "disasters" and "crises"?

And other questions which help to clarify the area of activity/influence of the Red Crescent Association.

C- Scale

1. At what level will the activities of the Association be carried out: at local, national, regional or worldwide level? Or simply at every possible levels?

2. Is it concerned with single individual human beings, or with families, neighbourhoods, cities, or with all of these?

3. Does it draw distinctions of, say, cultural or religious nature or does it treat Moslems and non-Moslems, men and women, adults and children … equally?

And other questions that help identify the exact scale and extent of its responsibilities/activities.

It is only after we have gathered responses to such questions that it becomes possible to plan and regulate the Associations systematic relations in its living and working environments. And it is then that the potentials and capabilities of the Association can be defined. And only then it will be possible to determine the areas and scales of its activities and its role in making the cities safer and in reducing the effects of natural disasters in urban areas and how it can intervene and help in urban planning.

APPENDIX VI

"Tehran-80 Strategic Plan" at a glance

Tehran's Strategic Plan-80, at a Glance

In 1995, Tehran Municipality developed a Strategic Plan through extensive research the results of which were printed as a book titled "Tehran's Strategic Plan-80". The book was published in March 1996 by the Department for Studies towards Planning.

As this book reflects the city management approaches that had prevailed in Tehran and the consequences of the actions taken, and the problems and shortcomings that emerged, a summary of the contents of the book may be of great interest.

At the end of the ***Summary*** *given below a comparison is between the Municipality's performance in 1997-1998 with the Strategic Plan-80.*

Plan Summary

As Tehran is the capital city, the political and social centre, and the largest city in the country, and since it plays a significant role in the region, it was necessary to develop and improve qualitatively and quantitatively its religious, social, cultural and artistic activities. This necessitated, more than ever, a well thought out plan and co-ordinated management to answer the material and spiritual needs of the people. The aim was to satisfy the inhabitants' social and spiritual demands through proper and coordinated use of natural resources, geographic conditions and economic advantages while reviving the city's essential Islamic culture. This Plan which was drawn up for Tehran as the centre of the Islamic Republic -of Iran with all its historic characteristics, primarily attempted to co-ordinate all other organs with the Municipality's efforts.

Tehran's Strategic Plan-80 seeks to develop a municipality that would allow the realization of a meaningful Islamic-civic society in today's world. The preliminaries of the Plan were introduced in 1995 as the first step in a strategic programme towards the year 1380 (ending 20 March 2002).

The Idea was to Turn Tehran into:

A dynamic, capable city that can satisfy the needs of its inhabitants; a law-abiding, safe and secure city that would lead to equality of its inhabitants; a self-sufficient city that has reasonable social relations and admirable cultural functions.

These were the ideals and the objectives of the Plan-80 as a collection of harmonized actions for the materialization of the same objectives. Plan-80 is the process of improving the decision-makings, and the performance of the city management.

Before the charting of the Plan, an opinion poll was carried out to find out the views and recommendations of the inhabitants on the problems and solutions, and their demands. Then, to specify exactly the aims and policies,

- the views of specialists on city affairs,
- the aims of the 1st and 2nd five-year development plans, and
- the experiences of other major cities of the world in the area of town planning,

were gathered and analyzed These efforts resulted in the formation of a number of general objectives and policies for resolving the city's problems. Furthermore, an executive programme was drawn up as a number of projects to be implemented by 1380 (2001). Thus the Plan-80 was prepared in two stages:

Stage 1:

Considering the prevalent conditions and the prospects of the year 1380 and the projects required to achieve the objectives, six aims were identified, in 1995, and suitable policies were proposed.

Aim I : a clean city, with 24 policies

Aim II : a city with flowing traffic, with 21 policies

Aim III : a green city, with 16 policies

Aim IV : a rich city, with 10 policies

Aim V : a dynamic city, with 27 policies

Aim VI : a city with both traditional and modem fabrics, with 31 policies.

Stage 2:

The second stage took place in 1996 when the 1995 Plan-80 was revised. At this stage the essential projects of Tehran-80 were specified as follows:

- Introduction :Definition and description of the policies adopted
- Starting Point :Description of the prevailing conditions with respect to each policy, qualified as far as possible.
- Destination :The image of the state and conditions expected. This state was to materialize by 1380 or beyond, but in either case the picture or image of the state had to be completed by 1380.
- The Way and Means: The routes for moving from the existing conditions to the desired state; at least one route had to be defined
- The Executive Organ: That was a matter to which attention had to be paid, to ensure the proper execution of the project execution, costs, project management etc
- Projects: Each project to be specified and defined with models and instructions.

The projects were drawn up in the following stages:

1-Specifying each essential project and conducting the programme as prepared in 1995, reporting on such projects, and listing the implementation stages

2-Confirmation of reports on essential projects and listing them

3-Division of work and formation of secondary groups for the determination of implementation procedures and executive stages of each pivotal plan so that the executive plans may be prepared

4-Confirmation of the final executive plan of each of the pivots within the six aims

5-Preparation, in 1996, of a final report on the executive plans for the various pivotal plans and the report on Tehran-80.

Expertise was another main objective of this plan to be executed by the following teams of experts:

1. Council on Strategic Plan
2. Coordination Team
3. Planning Groups (comprising of six groups each aimed at one of the six objectives that had been foreseen).

Each team had a clear objective. The Coordination Team had the responsibility of guiding and directing the efforts. Its responsibilities included:

1. Supervising and directing the Planning Groups within the framework of their assigned duties.

2. Identifying the statistical needs and preparation of the relevant forms.

3. Reviewing the pivotal plans of the Groups and establishing the priorities.

4. Coordination and reconciliation of the Team's executive plans.

5. Reviewing the allocation of resources to the pivotal plans taking into account the unfinished projects and other expenses.

6. Reviewing and preparing the projects for the various districts, for submission to the Planning Group.

7. Final correlation and compilation of the teams' reports to be presented to the Council on Strategic Planning.

8. Continual preparation of a progress report on the works of the teams and resolving their problems.

9. Recording the discussions of each meeting.

10. Following up the approvals of the Council on Strategic Plan.

11. Preparation of the minutes of the meetings and scheduling the works.

12. Coordinating the meetings.

13. Division of work among the members of teams and the follow up of their duties.

14. Submission of reports, statistics and information as needed by the teams.

15. Participation of the experts of the Research & Planning Centre as the Secretary of the Team, in the various meetings.

16. Appointment of the Chairman of the Team in the first meeting.

17. Preparation of the essential plans of Tehran-80 in 1996 within the framework set by the Council on Strategic Planning.

The managerial responsibility and the roles of the six groups were determined as follows:

1.Reviewing and commenting on the plan and the documents it is based on, in 1996.

2. Setting quantitative objectives for each of the years of the Plan.

3.Defining the pivotal plans according to the instructions set by the Coordinating Team.

4.Determining the actions required towards the materialization of the annual quantitative objectives.

Table 1- Expert Assessments on Tehran-80 Plan

Group Name		No of Sessions		Hours*		Members		
		74	75	74	75	74	75	
Council on Strategic Plan			41	18	82	45	3	4
Coordinating Group		21	23	48	62	4	6	
Specialized Planning Group	Clean City		22	37	67	145	6	7
" " "	Flowing City		21	29	65	144	6	7
" " "	Green City	28	37	89	116	5	6	
" " "	City with Rich Culture		25	42	82	148	6	5
" " "	Dynamic City	24	43	104	137	5	6	
" " "	City with Traditional & Modem Fabrics	35	45	117	154	7	9	
Total		**217**	**274**	**654**	**951**	42	50	

*In the above figures, the number of hours a guest has participated in the sessions has not been included nor those of a member who did not participate in over 30.

The total number of sessions held in the period 1995-96 and the number of hours spent in these meetings (totally 61,505) are given in Table 1, below:

The executive stage of each plan is, naturally, its most important phase. A review of Tehran-80 Plan was carried out in order to evaluate the plans foreseen. This led to a transformation in the Plan's basic policies. A total of 31 pivotal plans, within the six objectives, were defined. These plans were defined on the basis of the following considerations:

1. The plan must have a significant effect in attaining the objectives

2. The pivotal plans must not be contradictory

3. The pivotal plans must in practice have the highest chances of materialization

4. These plans must be of qualitative and quantitative nature

5. The plans must be prepared with consideration as to the limitations of resources (human, financial, information ...)

6. Pivotal plans must deal with the city's major problems

7. The pivotal plans can be the main headings of the 1995 Plan

8. Each objective may be given 3 to 6 pivotal plans. If an objective is to be given more than 6 pivotal plans, this must be done in coordination with the Coordinating Group and the Council on Strategic Plan. These pivotal plans and the objectives towards which they were aimed, are given below:

1- Pivotal Plans for a Clean City

1-1- Comprehensive Plan for Control of Air Pollution

1-2- Comprehensive Plan for Reduction and Control of Noise Pollution

1-3- Comprehensive Plan for Management of Solid Surplus & Waste Material

1-4- Control of Pollution in the Surface Water Drainage Brooks

1-5- Organization of Industries & Jobs

2- Pivotal Plans for a Flowing City

2-1- Improvement in Expressways and Access ways Network

2-2- Improvement in Public Transportation Facilities

2-3- Enhancement in the People's Notion & Culture of Traffic through Research and Education

2-4- Coordinating City Development and Land Uses through Transportation Programming

2-5- Management & Control of Transportation & Traffic System

2-6- Organizing Terminals & Transportation of Goods

3- Pivotal Plans for a Green City

3-1- Securing Untreated Water for Green Spaces

3-2- Completion of Green Belt round the City and Purchasing the Land Required

3-3- Preparing Regulations & Amending Laws on Maintenance of Green Space & Attracting the Citizen's Participation & Training them

3-4- Identifying the Species Compatible with the Ecosystem and use of Computerized Information System

3-5- Principles and Criteria regarding Green Space & Open Space Design, & City Beautification

4- Pivotal Plans for a Culturally Rich City

4-1- Development & Expansion of Religious & Social Activities & C enters

4-2- Development & Expansion of Cultural, Artistic & Social Activities & Centres

4-3- Development & Expansion of Sports, Social Activities & Centres

4-4- Development & Expansion of Educational, Scientific & Social Activities & Centres

4-5- Development & Expansion of Tourist & Social Activities & Centres

4-6- Quantitative & Qualitative Information Technology.

5- Pivotal Plans for a Dynamic City

5-1- City Laws & Regulations on a Dynamic

5-2- Dynamic Administration by Tehran Municipality

5-3- Dynamic City Administration

6- Pivotal Plans for a City with Modem & Traditional Fabrics

6-1- Three-Dimensional Plan & Spatial Organization of City

6-2- Organization & Distribution of Service & Infrastructure Spaces

6-3- Organization of City's Old and Decaying Fabrics

6-4- Organization of the System for Control of Construction Developments in the City

6-5- Policy-Making on, & Organizing City's Limits & Area of Security

6-6- Base for Data Processing (?) at Tehran Municipality.

The budget required by each of the objectives and the relevant pivotal plans were identified. Tables 2, 3 and 4 give the amounts of the budget and their distribution among the various municipality development projects and the organizations affiliated to the municipality.

As can be seen from table 2 and 3 the largest budget was allocated to the 2nd Objective (49.55%) and of this amount the largest part went to the first pivotal plan, ie towards improving the access way and expressways networks.

Table 2- Budgets for Development Projects of Municipality & Related Organizations, according to Plans (Million Rials)

Objectives	1997-98	1998-99	1999-00	2000-01	2001-02	Total
Clean City	23120	153364	96462	185870	137503	596319
Flowing City	629197	452510	608910	857600	857850	3406067
Green City	59622	97107	94148	113432	112610	476919
City with Rich Culture	124432	225045	246615	251840	401510	1249442
Dynamic City	55860	126100	105570	52860	42660	383050
Modem & Traditional Texture	175708	130365	186310	108160	1621rn0	762663
Total	**1067939**	**1184491**	**1338015**		**1569762**	**1714253**
6874460						

Table 3- % ages of Budgets for Development Projects of Municipality & Related Organizations, according to Plans (Million Rials)

Objectives	1997-98	1998-99	1999-00	2000-01	2001-02	Total
Objective 1	2.16	12.95	7.21	11.84	8.02	8.67
Objective 2	58.93	38.20	45.51	54.63	50.04	49.55
Objective 3	5.58	8.20	7.04	7.23	6.57	6.94
Objective 4	11.65	19.00	18.43	16.04	23.42	18.18
Objective 5	5.23	10.65	7.89	3.37	2.49	5.57
Objective 6	16.45	11.00	13.92	6.89	9.46	11.09
Total	100	loo	loo	100	100	loo

Table 4- % ages of Budgets for Development Projects of Municipality & Related Organizations, according to Plans (1,000 Rials)

Organizations, according to plans towards "Tehran -80"

Pivotal Plans	1997-98	1998-99	1999-00	2000-01	2001-02	Total
Pivotal 1	3700	6289	4687	4465	4413	23554
Pivotal 2	400	2650	2360	920	700	7030
Pivotal 3	19020	39245	8885	66965	36660	170775
Pivotal 4	0	98300	73220	107470	90660	369650
Pivotal 5	0	6880	7310	60501		5070 25310
Objective 1	**23120**	**153364**	**96462**	**185870**	**137503**	**596319**
Pivotal 1	418022	268000	354750	64950	596450	2202172
Pivotal 2	147550	112500	163790	122770	121920	668530
Pivotal 3	575	3980	8230	12130	10530	35445
Pivotal 4	62590	62630	67040	132650	119850	444760
Pivotal 5	460	5400	15100	25100	9100	55160
Objective 2	**629197**	**452510**	**608910**	**857600**	**857850**	**3406067**
Pivotal 1	1995	36250	34060	33000	33000	138305
Pivotal 2	28300	9832	10063	26182	26490	100867
Pivotal 3	25234	35500	34400	34200	33300	162634
Pivotal 4	4093	9750	9650	13000	13000	49493
Pivotal 5	0	5775	5975	7050	6820	25620
Objective 3	**59622**	**97107**	**94148**	**113432**	**112610**	**476919**
Pivotal 1	7875	16400	30750	22670	26750	104445
Pivotal 2	17680	45814	45110	72770	90100	271474
Pivotal 3	5912	35786	51640	57120	86270	236728
Pivotal 4	515	11655	15315	12980	16990	57455
Pivotal 5	90200	95390	66900	45800	112800	411090
Pivotal 6	2250	20000	36900	40500	68600	168250
Objective 4	**124432**	**2250445**	**246615**	**251840**	**401510**	**1249442**
Pivotal 1	0	1850	1500	0	0	3350
Pivotal 2	47679	33500	33320	42560	40360	197419

Pivotal 3	8181	90750	70750	10300	2300	182281
Objective 5	**55860**	**126100**	**105570**	**52860**	**42660**	**383050**
Pivotal 1	0	11015	7400	3000	3000	24415
Pivotal 2	141254	104850	118820	79800	107300	552024
Pivotal 3	2770	4330	36020	5790	33000	81910
Pivotal 4	1534	2120	1870	820	820	7164
Pivotal 5	30000	7200	21600	18750	18000	95550
Pivotal 6	150	850	600	0	0	1600
Objective 6	**175708**	**130365**	**186310**	**108160**	**162120**	**762663**
Total	**1067939**	**1 1184491**	**1338015**	**159762**	**1714253**	**6874460**

According to Tehran-80 Strategic Plan, the authorities assigned with the task of implementing these pivotal plans were mainly the deputy mayors and the organizations and institutions related to them. The mayor authorities were:

-The department under the Deputy Mayor for Traffic & Transport

-The department under the Deputy Major for City Service

- The department under the Deputy Mayor for Technical & Developmental Affairs
- The department under the Deputy Mayor for Social & Cultural Affairs
- The department under the Deputy Mayor for Planning & Coordination
- The department under the Deputy Mayor for Finance & Administration
- The department under the Deputy Mayor for Town Planning & City Architecture
- The department under the Deputy Mayor for Traffic & Transport
- The department under the Deputy Mayor for Traffic Control
- The department under the Deputy Mayor for City Districts
- The department under the Deputy Mayor for Parks & Green Spaces
- The department under the Deputy Mayor for City Renovation
- The department under the Deputy Mayor for Cultural Space Development Co.

Among the other organs that played roles in the pivotal plans, and which not related to the Municipality, were:

- Forests & Pasture Organization
- Tehran Province Natural Resources Organization
- Minister for Agriculture
- Environmental Protection Organization
- Faculty of Environment
- Endowment & Charity Organization
- Centre in Charge of Mosques
- Welfare Organization
- Ministry of Islamic Guidance
- Physical Education Organization & Similar State Organizations
- Ministry of Education
- General Department for Public Relations & International Affairs of Tehran Municipality
- Legal Department of Tehran Municipality
- Cultural Heritage Organization.

Also effective were the participation of both the public and private sectors, city environment improvement organizations, plans for the creation of sports and recreation facilities, and creation of security organizations.

In the final analysis, Tehran-80 Strategic Plan's effects and role in the future composition and distribution of municipality budgets over a 5-year period as tasks undertaken by Tehran Municipality and the Ministry of Interior.

* The budget codes and the names of the plan had been announced by the Ministry of Interior. Tehran Municipality was obliged up to 1999, to prepare its budgets according to the codes and arrangement.

** The highest budget allocated to Objective No 2 (Flowing City) and the Plan for Improvement of Traffic Flow.

*** The lowest budget went to objective No 5 (Dynamic City) and the Plan for Security.

ABBREVIATIONS

ARCEC	Arcolog Consulting Engineers Company
ATCEC	Atek Consulting Engineers Company
BACEC	Bavand Consulting Engineers Company
BNCEC	Banian Consulting Engineers Company
GOCEC	Gueno Consulting Engineers Company
HCSAUP	Higher Council of Surveying Architecture and Urban Plans
NPCEC	Naghsh-e-Jahan Pars Consulting Engineers Company
NCCI	National Cartography Center of Iran
PCROT	Project Control Centre of Renovation Organisation of the City of Tehran
PCTAC	Project Control Centre of Tehran Abadsaz Company
ROT	Renovation Organisation of the City of Tehran
SHCEC	Sharestan Consulting Engineers Company
TASC	Tehran AbadSaz Company
TACEC	Tarh-o-Abadi Consulting Engineers Company
TDDTM	Technical and Development Deputy of Tehran Municipality
TETCO	Tehran Engineering and Technical Consulting Organisation
TSC	Tehran Specialised Council
TTBC	Tehran TadbirBaft Company